SCL65TM

Self Contained Leaf Vacuum



April 2015 Model

Owner's Manual
Safety Manual
Pre-Operating Manual
Operating Manual
Maintenance Manual
Service Manual
Parts Catalog

Sold and Serviced by:

www.xtremevac.com

514060

⚠ CAUTION

DO NOT ATTEMPT TO OPERATE OR REPAIR THE LEAF COLLECTOR WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL

IF YOU HAVE ANY QUESTIONS CONCERNING THE INSTALLATION OR OPERATION OF THIS UNIT, PLEASE CALL ODB FOR ASSISTANCE BEFORE ATTEMPTING TO REPAIR OR OPERATE THE UNIT.

IMPROPER USE OF ANY MACHINE CAN RESULT IN INJURY!

STUDY AND FOLLOW ALL SAFETY PRECAUTIONS BEFORE OPERATING OR REPAIRING UNIT

THIS MANUAL IS AN INTEGRAL PART OF THE LEAF COLLECTOR AND SHOULD BE KEPT WITH THE UNIT WHEN IT IS SOLD.

Registration

Please take the time to register you leaf collector and your engine for warranty purposes.

You may go to our website: www.xtremevac.com to register your unit or use the warranty sheet below and mail to:

Attn: Xtreme Vac Registration
Xtreme Vac
5118 Glen Alden Drive
Richmond, VA 23231

You may also fax the form to: (804) 226-6914.

For engine registration, please use the forms provided in your engine owner's manual.

XTREME VAC LEAF COLLECTOR / XSWEEP WARRANTY REGISTRATION
(Register your leaf vacuum or XSWEEP to start your warranty)

Register online at www.xtremevac.com/register.asp

Purchaser's Name ______________________________

Department ______________________________

MAILING Address ______________________________

City ______________ State/Province __________ Postal Code ____________

Leaf Collector Serial Number ☐☐☐☐–☐☐☐☐

Leaf Collector VIN Number 1 Z 9 P ☐☐☐☐☐☐ R 1 6 8 ☐☐☐

Date Delivered (mm/dd/yyyy) ______/______/_____

Leaf Collector/Sweeper Model Number (please check one)

❑ XV6527 ❑ XV8027/31 ❑ Xtreme Sweep ❑ XV6000 ❑ SCL65TM ❑ Other:_________

Engine Manufacturer: ❑John Deere ❑Kawasaki ❑Cummins ❑Caterpillar ❑Other:______________

Engine Serial Number: ☐☐☐☐☐☐☐☐☐☐☐☐☐

(example PE4045T123456, John Deere engines must have 13 characters)

Contact Name ________________________

Telephone (______) _______ - __________

THANK YOU FOR PURCHASING AN Xtreme Vac!

Note: This form may be **faxed** to (804) 226-6914

The leaf collector owner's and safety manual was recieved. I understand that it is the responsibility of each user and mechanic to carefully read and understand the safety and operating sections of the owner's manual.

______________________ ____________
Purchaser's Signature Date

REGISTRATION

⚠WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

PLEASE RECORD THE FOLLOWING INFORMATION BEFORE PLACING THE UNIT INTO SERVICE:

Model Number:__________________ Unit Serial No.:______________________________

Purchase Date:__________________ Engine Serial No.: ______________________________

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⚠WARNING Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

1.0 GENERAL SAFETY

Contents

SAFETY PRECAUTIONS

⚠WARNING **Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.**



If the decal above is missing or damaged call ODB immediately and we will send you a replacement free of charge. Never operate a unit with damaged or missing safety decals.

⚠DANGER **DO NOT RIDE, SIT OR STAND ON UNIT**

⚠DANGER **DO NOT MODIFY THE UNIT FOR RIDERS IN ANY WAY. SERIOUS INJURY OR DEATH MAY OCCUR**

ODB's leaf collectors are NEVER to be used to accomodate riders. If your unit has been modified to accomdate riders, remove these modifications immediately as this can result in serious injury or death.

SAFETY PRECAUTIONS

⚠ WARNING | **Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.**

1.1 Safety Symbol Definitions:

This manual provides the owners/operator with procedures for safe operation, maintenance and repair of your leaf collector. As with any machine, there are hazards associated with their operation. For this reason safety is emphasized throughout this manual. To highlight specific safety information the following safety definitions are provided to assist the reader.

The purpose of safety symbols are to attract your attention to possible dangers. The safety symbols, and their explanations, deserve your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instructions or warnings they give are not substitutues for proper accident prevention measures.

SYMBOL	MEANING
	**SAFETY ALERT SYMBOL:** Indicates danger, warning or caution. Attention is required in order to avoid serious personal injury. May be used in conjuction with other symbols or pictographs.
⚠ DANGER	**Disregarding this safety warning <u>WILL</u> result in serious equipment damage, injury or possible death.**
⚠ WARNING	**Disregarding this safety warning <u>CAN</u> result in serious equipment damage, injury or possible death.**
⚠ CAUTION	**Disregarding this safety warning <u>MAY</u> result in minor or moderate injury or property damage.**

⚠WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

1.2 Do's and Do Not's:

This section contains some general safety precautions to do and not to do. This is not an all inclusive list and and it is the responsibilty of the operator to have proper training and use common sense in work situations.

⚠WARNING

DO NOT:

1. DO NOT operate, maintain or repair this unit without having fully read and understood ALL the aspects of this manual.
2. DO NOT ride, sit or stand on unit at anytime.
3. DO NOT modify the leaf vacuum for any reasons to allow for riders.
4. DO NOT operate the unit in a state of disrepair.
5. DO NOT operate the unit with ANY guards or safety devices broken, missing, or inoperable.
6. DO NOT operate the unit without wearing proper safety equipment.
7. DO NOT operate this unit while under the influence of any alcohol or medication.
8. DO NOT operate this unit if you have a record of mental instability or dizziness which could result in injury to yourself or others.
9. DO NOT operate this unit if you are under 18 years of age.
10. DO NOT operate this unit without fully inspecting the unit for any damage or leakage.
11. DO NOT operate if the unit has any excessive vibration.
12. DO NOT operate unit with the inspection door limit switch damaged or missing.
13. DO NOT tow unit without using all the safety chains.
14. DO NOT tow unit with a damaged tongue.
15. DO NOT fill fuel tank with engine running. Allow engine to cool for 5 minutes before refueling.
16. DO NOT operate unit if fuel is spilled or with fuel cap off.
17. DO NOT smoke or weld near the unit.
18. DO NOT run engine in an enclosed area.
19. DO NOT place hands or feet near moving or rotating parts.
20. DO NOT operate engine with an accumulation of grass, leaves or other debris on the engine.
21. DO NOT run engine with air cleaner removed.
22. DO NOT leave leaf machine unattended while in operation.
23. DO NOT park machine on steep grade or slope.
24. DO NOT vacuum a leaf pile without looking for foreign objects such as metal, glass, plastic or large pieces of wood.

WARNING

DO NOT, continued;

DO's:

1. DO completely read and understand the owner's manual before operating, maintaining or repairing the leaf collector.
2. DO follow engine and PTO manufacturer operating and maintenance instructions.
3. DO check fuel lines and fittings frequently for cracks or leaks. Replace if necessary.
4. DO completely inspect the unit before leaving the service garage.
5. DO check the tow tongue each day for cracks.
6. DO inspect and be attentive to what is being vacuumed.
7. DO check the impeller, liners and blower housing for cracks or holes daily.
8. DO remove the lead spark plug wires, if equipped, before doing any maintenance on the unit.
9. DO wear proper safety equipment as described in this manual.
10. DO watch for pedestrians, animals and other foreign material when vacuuming leaves.
11. DO replace any worn or missing safety stickers immediately.

WARNING

1.3 Training:

⚠WARNING

Improper use of the ODB leaf collector CAN result in severe personal injury or death. All personnel using this leaf vacuum must be trained and qualified with all the operations, maintenance, repair and safety procedures defined in this manual.

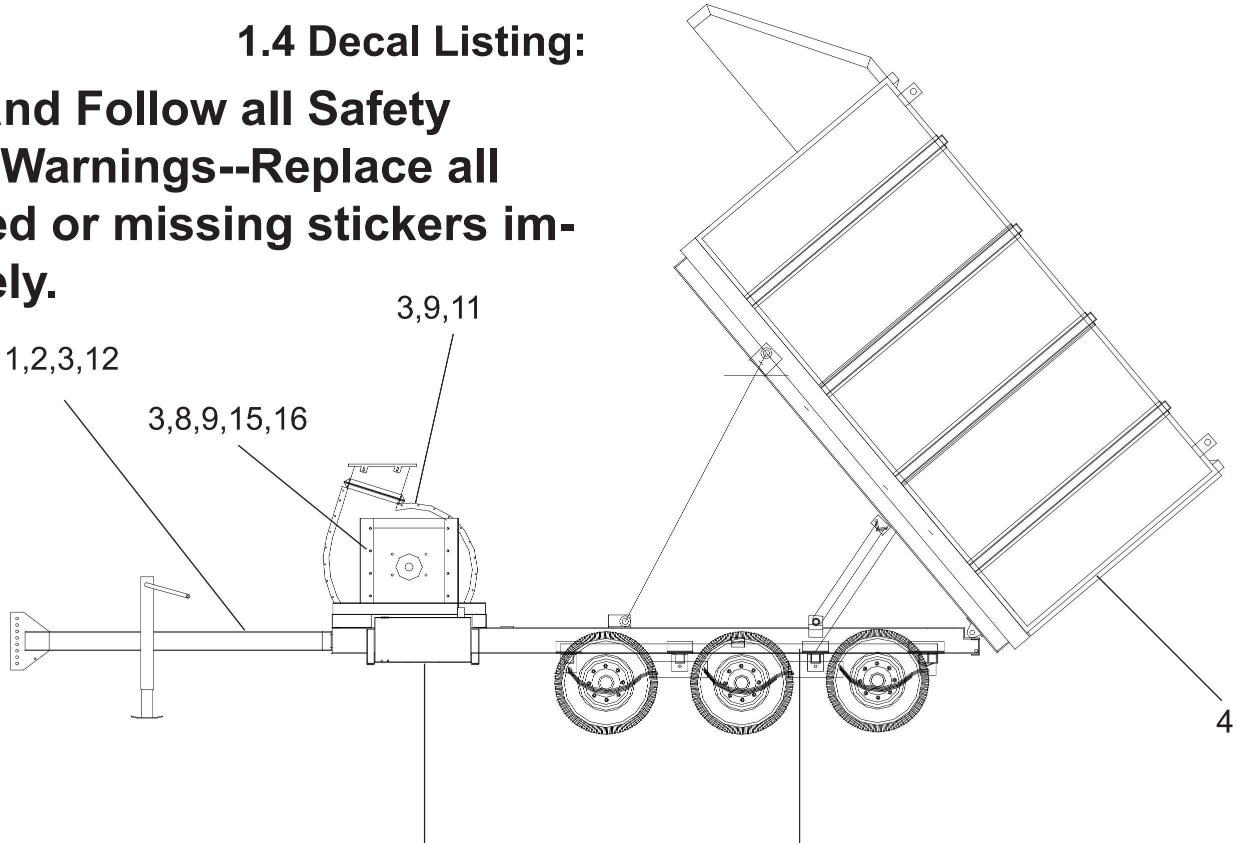
The warnings and procedures regarding safety in this manual are to be used as a guideline only. It is impossible to cover all the events that could happen in the vacuuming process. For this reason, it is vital that the owner accept the responsibility to implement a training program that will provide every operator or mechanic the basic skills and knowledge to make good judgement in all situations.

This training program must include the entire scope of hazards, precautions and government regulations encountered in the vacuuming process. The program should stress the need for regularly scheduled preventive maintenance and detailed equipment safety checks.

It is strongly recommended that all training programs be documented to ensure all operators and mechanics receive initial training on not just the operation but the safety features of the leaf collector.

1.4 Decal Listing:

***Read and Follow all Safety Sticker Warnings--Replace all damaged or missing stickers immediately.**



Decals shown on next page

ITEM NO.	PART NUMBER	DESCRIPTION
1.	200175	Danger--Do Not Raise Hoist Without Trailer Attached...
2.	200179	Danger--Do Not Ride, Sit or Stand on Unit
3.	200181	Danger--Head, Eye and Ear Protection Required
4.	200186	Danger- Do Not Open Doors While Unit is In Operation
5.	200188	Danger- Do Not Go Under Raised Body...
6.	200055	Use Diesel Only
7.	200177	Danger--Flammable
8.	200059	Do Not Engage PTO over 1,000 RPM
9.	200183	Danger--Rotating Parts
10.	200178	Danger--Explosion Hazard
11.	200189	Danger--Check Impeller and Liners Daily for Wear
12.	200180	Danger--Inspect Tow Bar for Damage
13.	200104	Warning--Check Lug nuts
14.	200061	Xtreme Vac leaf collection systems sticker
15.	200120	Throttle decal
16.	200112	Safety Shut off-Ignition decal
17.	200190	Caution- Unload Body Before Using Body Prop
18.	200187	Caution- Body must be braced before servicing hoist...
19.	200185	Caution- Operation of Body Prop

1.4 Safety Decals - Decal Layout for X-treme Vac

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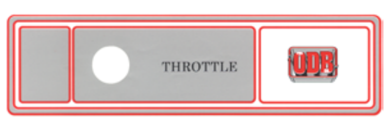

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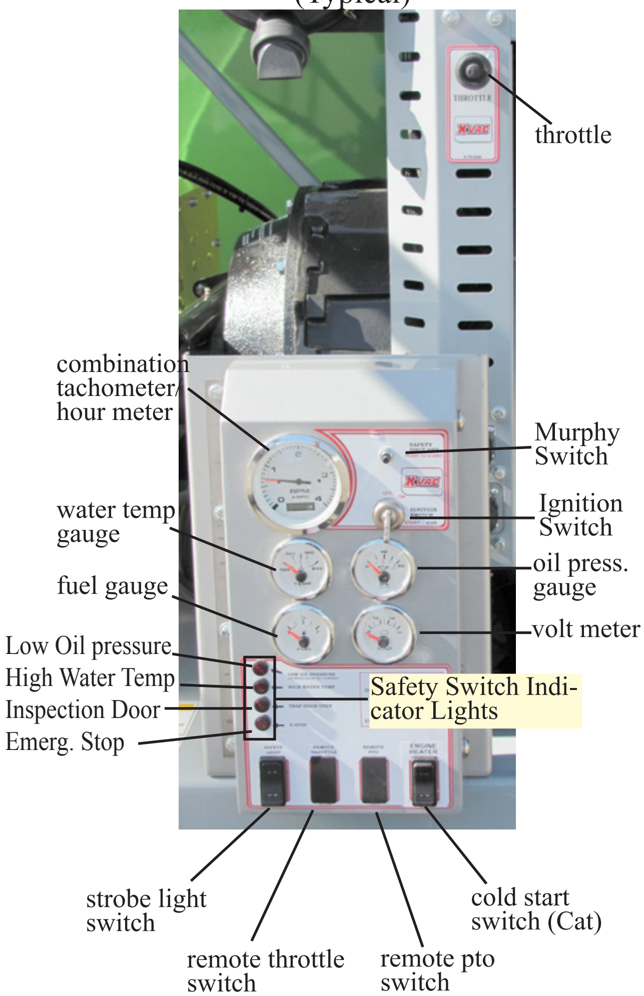

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⚠WARNING **Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.**

2.0 PRE-OPERATING SECTION

2.0 PRE-OPERATING SECTION

(Typical)



⚠ CAUTION

Always make sure the PTO is disengaged before starting unit.

2.1 Instruments and Controls:

Ignition Switch:
Used to power the accessories and start the unit. Unit will not start without Murphy switch depressed.
ACCESSORIES - first position
STARTER ENGAGE - second position (springs return to first position)

Murphy Switch:
This switch overrides the low oil pressure and high temperature cutoff control. This switch must be depressed before the starter engages. After the engine starts, wait for oil pressure to rise before releasing the button.

Throttle:
This control provides positive locking and vernier adjustment of engine.

Combination Tachometer / Hour Meter:
This gauge indicates the engine r.p.m's. The sender is located on the tachometer. The hour meter is digital and indicates the accumulated hours of the engine. This should be used to schedule maintenance.

Volt Meter:
The gauge shows the status of the engine charging system. When the charging system is operating properly it should read approximately 14 volts. If the gauge reads below 13 volts, the alternator is not charging the battery and the system should be checked by a qualified technicican.

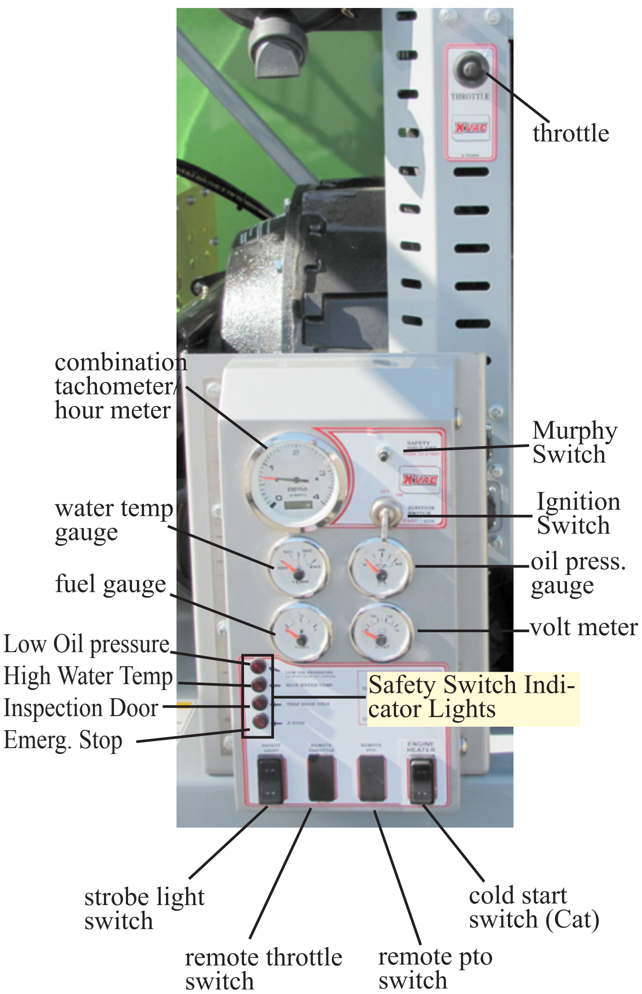
Oil Pressure Gauge:
Confirms and indicates the presense and pressure of engine oil. If the gauge reads low, it should be checked by a qualified technician.

Engine Temperature:
Indicates the engine coolant temperature. If the gauge reads over 240 degrees the unit should be checked by a qualified technician.

Hour Meter:
Indicates the accumulated hours of the the engine. This should be used to schedule maintenance.

2.1 Instruments and Controls, cont.:

(Typical)



⚠ CAUTION

Always make sure the PTO is disengaged before starting unit.

SAFETY SWITCH INDICATOR LIGHTS

These lights work with the Murphy (safety) shut off switch. When the light is on it indicates that the shut off switch has been tripped and the light indicates which device caused the trip.

Low Oil Pressure Indicator Light:
When lit the engine has reached a low oil pressure reading and has tripped (thus shut off the engine) the safety shut off (Muprhy) switch . This light will illuminate when the engine is first started until engine oil pressure has been established.

High Water Temperature Indicator Light:
Indicates the engine coolant temperature has reached 225 degrees and has tripped (thus shut off the engine) the safety shut off (Muprhy) switch.

Inspection Door Indicator Light:
Indicates that the limit switch located on the blower housing inspection door has been tripped (thus shut off the engine).

Emergency Stop Switch Indicator Light:
Indicates that the emergency stop switch (on the LCT650 only) has been depressed, tripping the safety switch and shutting off the engine.

ROCKER SWITCHES

Strobe Light Switch:
Turns the strobe light on or off

Remote Throttle Switch (optional):
Increases or decreases the engine throttle. Pressing and holding the top of the switch increases the thottle. The longer the button is pressed the higher the throttle is advanced. Pressing the bottom of the switch decreases the throttle in the same manner as increasing the throttle.

Remote PTO Switch (optional):
Engages or disengages the PTO. Pressing the top of the switch engages the PTO while pressing the bottom of the switch disengages the PTO.

Engine Heat Switch (Cummins engines only):
Press the top of the switch for 20 – 30 seconds initiates the glow plug to aid in starting a cold engine.

2.2 Safe Operations:

WARNING

ALL personnel using, maintaining or servicing this unit must be trained in all safety procedures outlined in this manual. Improper or careless use of this equipment CAN result in personal injury or death.

Operations shall be restricted to:

1. Properly trained, qualified and experienced operators and/or qualified and experienced maintenance and test personnel.

2. Trainees under the direct supervision of qualified and experience personnel.

3. Qualified and experienced maintenance and service personnel.

Operators who qualify to operate this equipment under the above restrictions shall also comply with the following physical requirements:

1. Have good vision and the ability to read and understand this manual as well as all safety and operational decals on the equipment.

2. Be capable of hearing, with or without a hearing aid, at a level needed to safely operate this equipment.

3. A record of mental stability with no history of epileptic seizures, dizziness, or any other disability that may result in injury to himself or others.

If any of these requirements are not satisfied at any time, the person failing to meet these requirements **MUST NOT OPERATE THIS EQUIPMENT.**

2.2 Safe Operations, continued:

Additional Requirements:

1. Each operator must demonstrate competence to understand all safety decals, operator's manuals, safety codes, applicable government regulations, and all other information applicable to the safe and proper operation of the leaf vacuum.

2. Each operator must demonstrate the ability to recognize an emergency situation that may arise during vacuuming operations and the knowledge and procedures to implement corrective action.

3. Each operator must demonstrate or provide evidence of qualificatation and experience prior to operating the leaf vacuum.

4. Each operator must be able to recognize existing or potential problems regarding the mechanical integrity of the leaf vacuum and report any maintenance requirements to the supervisor in charge.

5. Each operator must wear the proper personal clothing and safety gear. (Refer to SAFETY PRECAUTIONS Section 5.4)

6. Operators must not be physically or mentally fatigued.

7. Operators must not be under the direct or indirect influence of alcohol and/or drugs. This includes prescription drugs that could cause drowsiness, dizziness, or any other condition that would impair their ability to operate or use this equipment in a safe manner.

2.3 Preparation for Operation

CAUTION

Before your leaf vacuum is put into operation it is very important to read and follow the procedures outlined in the engine owner's manual. (EOM).

For specific information regarding the following checks please refer to the "Maintenance" section of this manual and the engine owner's manual.

WARNING

DISENGAGE the clutch and remove the negative battery cable before performing the following checks.

WARNING

NEVER place any part of the body under or behind guards or any other area in which you cannot see.

IMPORTANT CHECKS:

NOTE: The following checks contained in the next three sections should be performed prior to leaving the storage area.

1. Check engine fuel, coolant and oil levels. (see EOM)
2. Check engine air filter
3. Check all bolts and nuts to ensure they are tight.
4. Check all controls for free and proper operation.
5. Check main drive belt (if equipped) for proper adjustment.
6. Inspect the fan blades to ensure that they are not bent , deformed, fatiqued or cracked. Replace fan if any damage is present.
7. Inspect the intake hose flange to make sure it is connected correctly to the blower housing.
8. Inspect the leaf vacuum frame and structure for any bent, broken, cracked, missing or loose parts.
9. Check all guards to ensure they are undamaged, in place and properly secured.
10. All decals must be in place and legible prior to operating the leaf vacuum. See the decal section for decal replacement.

2.4 Pre-Transport Checks

⚠WARNING

Failure to properly hitch the leaf vacuum to the tow vehicle, verify the road worthiness of the leaf vacuum and the tow vehicle and verify all equipment is properly stowed, may cause serious injury or death to yourself or others.

TOW VEHICLE MUST have proper towing capacity for the leaf vacuum being towed. Check the tow vehicles operating manual for rated capacity.

Do not tow the leaf vacuum unless all important checks listed below are completed.

IMPORTANT CHECKS

1. Hitch is properly secured to tow vehicle and hose boom secured.
   Frame must be level or the tongue slightly lower than the rear of the leaf vacuum while towing to ensure proper weight distribution. The hitch may have to be adjusted when towing with vehicles of varying tow hitch height.

2. Safety chains installed correctly.

3. Chains routed under trailer tongue in an "X" pattern between tow vehicle and trailer.

4. Slack in chain should be adjusted to permit turning but should not be dragging on the ground.

5. Connect trailer wiring to the tow vehicle and ensure that all trailer lighting is operating properly.

6. Ensure that the safety breakaway switch is functioning properly and attached securely to the tow vehicle. Allow enough slack to ensure that vehicle turns will not activate the safety breakaway switch. **NOTE:** Follow manufacturers procedure to ensure tow vehicles brake control box is properly adjusted.

2.4 Pre-Transport Checks, continued:

7. Check the general condition of the tires, tire pressure and ensure that all lugnuts are securely fastened.

8. Visual examination of the leaf vacuum frame, suspension and structure to determine if all components are correctly positioned and secured for travel.

9. Check the intake hose boom to verify that it is securely fastened to the leaf vacuum and can not swing free. (if equipped).

10. Verify there are no loose tools or materials on the trailer, inside the intake and exhaust hoses, or inside the engine sheet metal.

11. Check all cones, wheel-chocks, signs or other support tools and materials to ensure proper stowage.

2.5 Personal Protective Equipment and Clothing

WARNING

Always wear proper safety equipment as outlined below, not wearing such equipment CAN result in serious personal injury or possible death.

IMPORTANT CHECKS:

Anyone operating the leaf vacuum equipment **MUST** wear appropriate protective equipment and clothing to protect them from injury during operations.

PROTECTIVE EQUIPMENT:

1. **Head Protection:** Hard hats without under-chin strapping.

2. **Eye Protection:** Wraparound goggle type eye protection held in place with an elastic band around the head or a hard hat mounted face shield, which provides full protection of the face.

3. Eye protection must meet ANSI Z87.1 standards.

4. **Hearing Protection:** plug type or “muff type” ear protection should be worn at all times while operating the unit.

5. **Breathing Protection:** Paper filter type dust masks should be worn to protect from dirt and dust particles during the vacuuming process.

6. **Reflective Vests:** Highly visible vests should be worn so motorists can see see the operator in all weather and lighting conditions.

7. **Work Gloves:** Gloves should be worn to protect the hands and wrists from debris.

8. **Steel Toed Boots:** should be worn to protect the feet.

DANGER

Work clothes MUST be close fitting, but not restrictive of movement, without any loose parts that could be entangled in any parts of the leaf vacuum. This includes items such as jewelry, chains and backpacks.

2.6 Work Site Preparation

WARNING

Never place any part of the body under or behind guards or any other visually obscured area.

Making sure the leaves are clear of possible dangerous material is critical to safe vacuuming. Vacuuming up metal, glass, rocks or other dangerous material CAN cause serious damage to the equipment or personal injury.

The following guidelines must be followed to insure safety.

1. An inspection of the leaves to be vacuumed must be done prior to the vacuuming process. We realize that it is impossible to completely inspect every inch of leaves being vacuumed, but it is imperative that all leaves be inpsected for obvious dangerous material before vacuuming.

2. The operator should never be in the line of traffic, the operator should work on the shoulder whenever possible.

3. The operators should place cones or other barriers to provide adequate warnings to vehicles and pedestrians that vacuuming is in progress.

4. Strobe lights on the leaf vacuum and on the tow vehicle should be on at all times for high visibility.

5. Confirm that all operators are wearing proper clothes and personal protective equipment.

6. Restrict all personnel, except the operator from the area near the leaf vacuum. **DO NOT** allow pedestrians, children or animals near the work area.

7. Make sure that the exhaust hose (if equipped) fits properly into the box container so that all debris is blown into the box container.

⚠WARNING

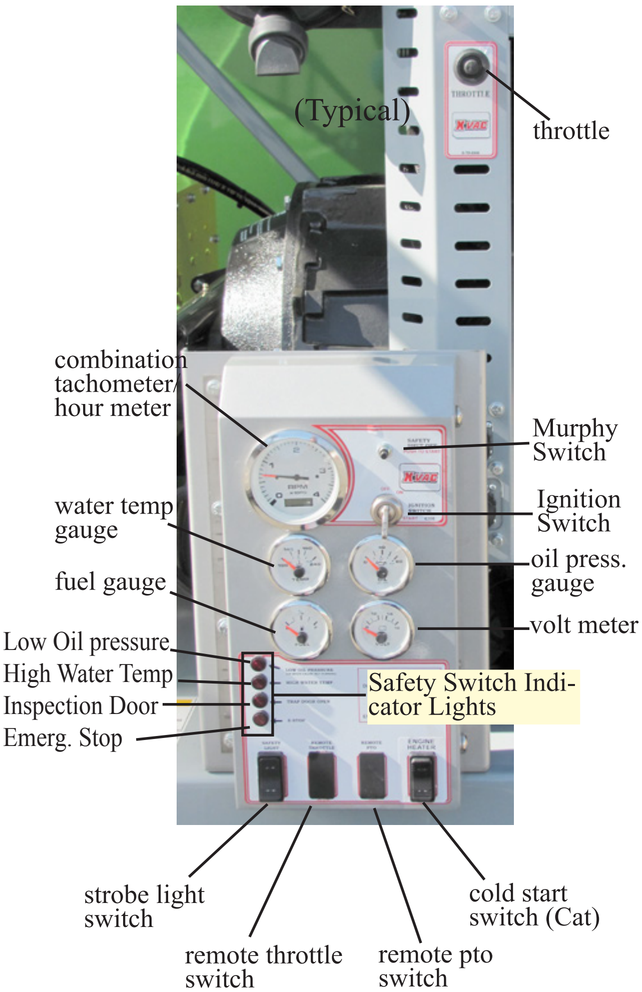
Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

3.0 OPERATING SECTION

3.0 OPERATING SECTION

3.1 Starting Engine

figure 3a



⚠ CAUTION

Always make sure the PTO is disengaged before starting unit. (See figure 3b)

⚠ WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

⚠ CAUTION

DO NOT start the engine in an enclosed building. Proper ventilation is required before starting the engine.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

Starting Procedure (refer to figures 3a and 3b):

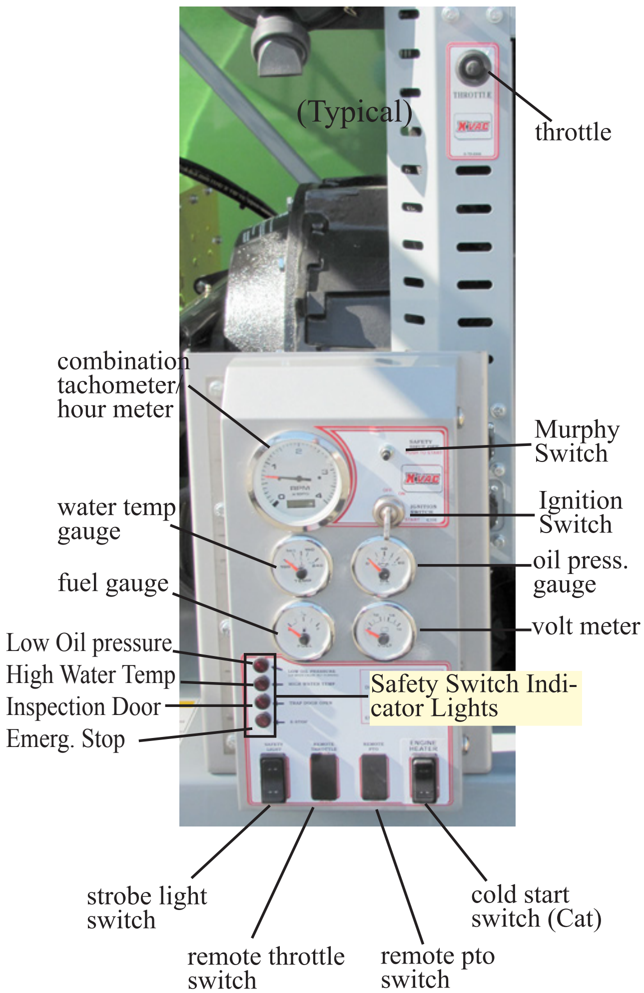
1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual.

2. Make sure the PTO is disengaged.

3. Turn the throttle control (fig. 3a) counter-clockwise 2 revolutions.

4. Depress and hold the Murphy switch while starting.

figure 3a



3.1 Starting Engine, continued;

<u>IMPORTANT:</u> Do not operate the starter for more than 30 seconds at a time. To do so may overheat the starter. If the engine does not start the first time, wait at least 2 minutes before trying again. If the engine fails to start after 4 attempts, see the trouble shooting section of the EOM and this manual.

5. Turn the ignition switch all the way to the right, when the engine starts release the ignition switch. It should spring back to the first position.

   <u>IMPORTANT:</u> If the ignition switch is released before the engine starts, wait until the starter and the engine stop turning before trying again. This will prevent possible damage to the starter and/or flywheel.

6. After the engine starts, continue to hold the Murphy Switch in until the oil pressure gauge reads at least 15 psi. The Murphy shut off switch will not allow the engine to operate below this level. If the gauge does not rise above 15 psi withing 5 seconds, stop the engine and determine the cause. Normal operating oil pressure is 50 psi with oil at normal operating temperature.

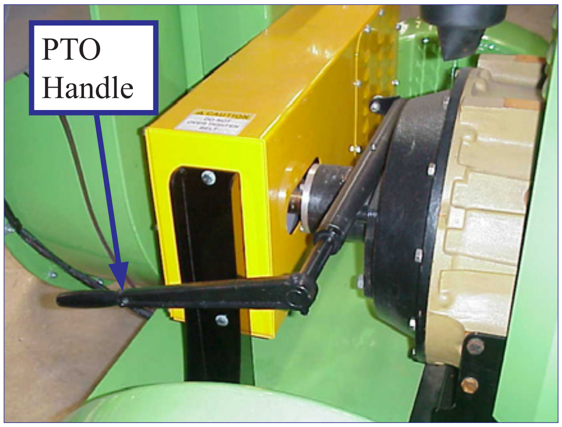
7. Check all gauges for normal engine opreration. If operation is not normal, stop the engine and determine the cause.

   <u>IMPORTANT:</u> To assure proper lubrication, operate the engine at or below 1200 rpm with no load for 1 -2 minutes. Extend this period 2 - 4 minutes when operating at temperatures below freezing.

8. Watch the coolant temperature gauge. Do not place engine under load until it is properly warmed up. The normal engine coolant temperature range is 180 - 202 degrees F.

3.2 Engaging the PTO

figure 3b



PTO shown disengaged

⚠WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

⚠WARNING

Make sure the intake hose is properly attached and make sure the front of the hose is clear of any objects which could be inadvertently vacuumed during the PTO engagement process.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

figure 3c



PTO shown fully engaged

Engaging the PTO (refer to figures 3b, 3c and 3d):

1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual.

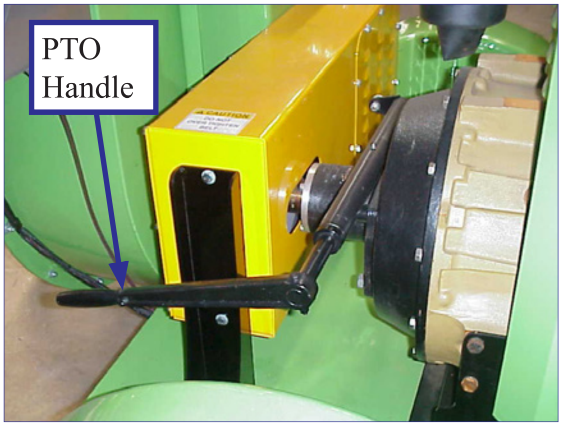
2. Start the engine as previously discussed in this manual and in the EOM.

3. Once the engine has been allowed to thoroughly warm up (engine temperature gauge should read at least 180 degrees) pull the throttle control until the engine reaches 1000 rpm.

4. Grasp the PTO handle (fig. 3b) and slowly raise the handle. **NOTE:** Some units have a PTO assist cylinder which engages the PTO at a specific speed in order to properly engage the PTO. Because of this the PTO handle only

3.2 Engaging the PTO, continued;

figure 3b



PTO shown disengaged

needs to be raised slightly, then the assist cylinder will take over and engage the PTO automatically. (fig. 3c)

5. **MPORTANT: If the unit experiences any heavy vibrations or makes any unusual noises, shut the engine down and after following the necessary safety guidelines, have a qualified technician investigage the cause. DO NOT operate a unit that is in a state of disrepair.**

6. If the unit is running smoothly and does not dispaly any excessive vibration, the unit is ready to vacuum leaves. **NOTE:** Please see the next section before vacuuimg leaves.

Disengaging the PTO (refer to figures 3b and 3d):

1. Decrease the rpm to 1000 rpm.
2. Grasp the PTO handle and slowly disengage the PTO.
3. When the PTO is fully disengaged, the engine can be shut down.

figure 3c



PTO shown fully engaged

3.3 Dumping the Body

DANGER

Make sure all people and animals are completely clear of the unit during the dumping process.

WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before staring the engine.

DANGER

Always operate the dump body controls from the front of the unit, standing beside the tongue.

WARNING

Make sure the unit is properly attached to the tow vehicle and the surface is level and solid before raising the body .

figure 3.3a

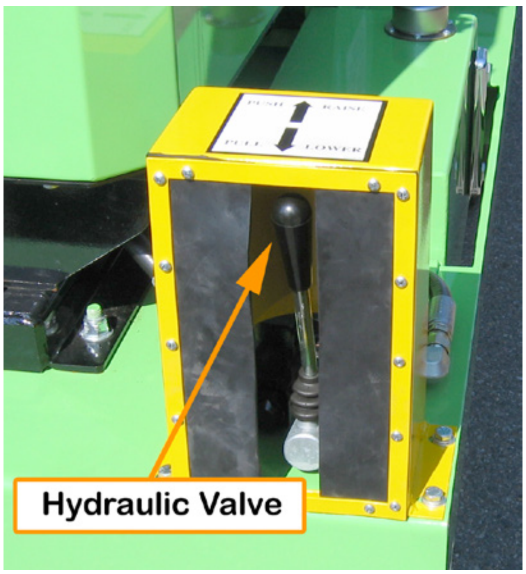
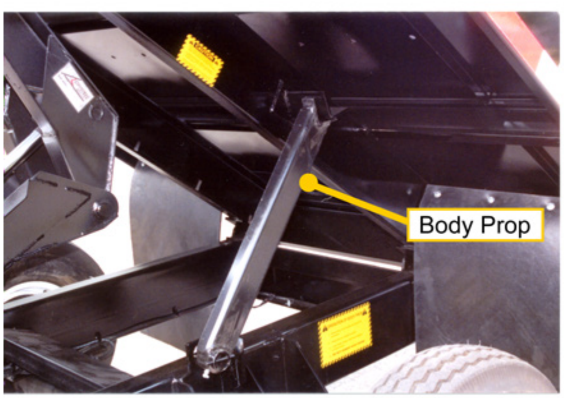


figure 3.3b



WARNING

Watch for any overhead obstacles such as power lines and tree limbs before dumping.

Review the Engine Operating Manual supplied with your leaf vacuum for specific start-up, maintenance and operating instructions. It is especially important to review break-in service procedures for brand new units.

Dumping the body (refer to figures 3.3a and 3.3b):

1. Perform all the pre-starting, pre-operating checks outlined in the EOM and in this manual.

2. Start the engine as previously discussed in this manual and in the EOM. Make sure the PTO is disengaged.

3. Do a thorough inspection of the entire area around and above the unit, looking for any object that could get in the way of the body dumping.

4. Make sure the surface is level and the ground is solid before dumping.

5. Open the rear doors and secure to the side of the box container.

figure 3.3a

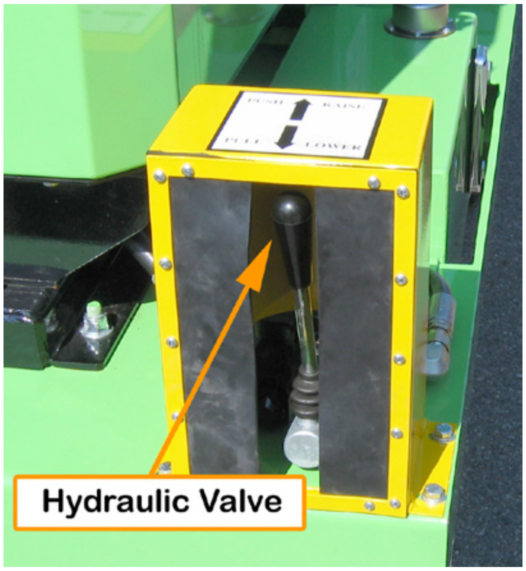


figure 3.3b

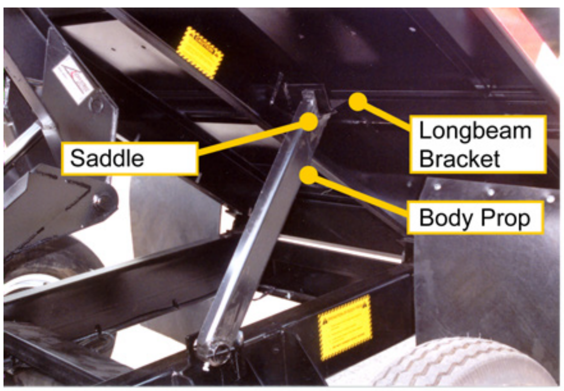
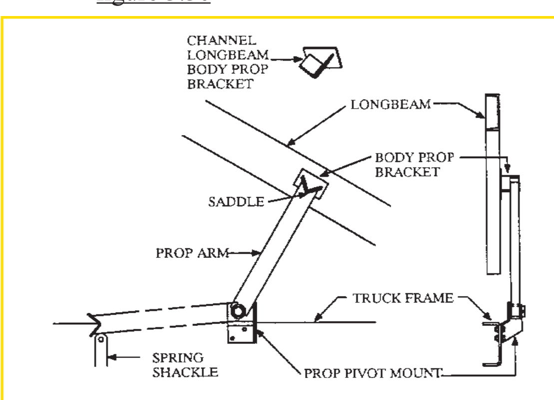


figure 3.3c



3.3 Dumping the body, continued;

6. Increase the throttle to 1,200 rpm. **Do not** race the engine while using the hoist.

7. Grasp the hand valve handle (fig. 3.3a) push the handle forward (toward the tank) to raise the body.

8. Raise the body only as high as it is needed to dump the load.

9. Shut off all power, raise the body prop(s) (fig. 3.3b) to a free standing position. Lower the body slowly until the the long beam bracket contacts the prop arm saddle (fig. 3.3c). DO NOT POWER HOIST DOWN.

<u>Lowering the body:</u>

1. Before lowering the body, walk completely around the unit and thoroughly inspect the area between the body and the unit's frame. Look for any object, person or animal that could potentially get between the dump body and the frame. **DO NOT** go under the body while inspecting.

2. Once the load has been dumped, start the engine as described in section 3.1. **DO NOT** race the engine.

3. <u>Slowly</u> raise the body just enough to clear the body prop saddle, lower the body prop to the storage position (fig 3.3c) and <u>slowly</u> lower the body.

4. The dump body may stop approximately 12" from the bottom due to the safety check valve. If it does, slowly raise the body a few inches and SLOWLY lower the body down. The body needs to be lowered extremely slow the last 12 inches or the check valve will stop the body.

5. Once the body is completely down, close the rear doors and prepare the unit for travel as detailed in this manual.

3.4 Vacuuming Leaves

⚠WARNING

Thoroughly read and understand the safety, pre-operating and operating sections of this manual before vacuuming. Wear the proper safety equipment as outlined in this manual.

⚠WARNING

Make sure the exhaust hose is connected to the box container properly before vacuuming leaves. Visually inspect the leaves before vacuuming for any material that could be harmful to the leaf vacuum or people. This includes bottles, wood, steel, glass, stone or other hard or breakable objects.

Vacuuming Leaves:

1. Start the engine and engage the PTO using the procedures stated earlier in this manual.
2. Set the engine throttle to around 1400 rpm.
3. NOTE: Always vacuum leaves using the lowest rpm as possible. This saves fuel and decreases the amount of dust escaping the box container.
4. Lower the intake hose to a few inches above the leaf pile. Hold the intake nozzle at a 45 degree angle to allow proper air flow. This should allow the leaves to be vacuumed. DO NOT bury the intake nozzle into the leaf pile, this will cut off the air flow and will make vacuuming much more difficult and increase the chance of clogging.
5. If the leaves are not vacuuming, increase the rpm to 1400 and try vacuuming at this setting.
6. NOTE: Wet leaves will need higher rpm's to vacuum whereas dry leaves will only need minimal rpm's.
7. Continue moving the nozzle in a sweeping motion above the leaves while vacuuming.

4.0 MAINTENANCE SECTION

WARNING

Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

4.0 MAINTENANCE SECTION

4.0 MAINTENANCE SECTION

4.1 Maintenance Overview:

⚠ CAUTION

Only properly trained personnel should perform maintenance or repair on this equipment. Consult ODB before performing any maintenance procedures that is not specificially covered in this manual. Improper maintenance or repair may void any and all warranties on this equipment.

⚠ WARNING

Improper maintenance or repair CAN result in equipment damage and/or personal injuries.

⚠ DANGER

BEFORE CONTINUING, please read and understand the Safety, Preoperating and Operating sections of this manual before doing any prodcedures in this section.

A properly maintained leaf vacuum will dramatically extend the life of the unit and will create a safer work place as well. For the general safety and welfare of all personnel it is important to create a scheduled maintenance program that covers all the elements in this manual as well as the engine, PTO and axle owner's manuals provided with this unit.

Use the chart on the following page as a guide for your scheduled maintenance program. If there are any questions concerning any ot these procedures please call the factory or your dealer.

4.2 Maintenance and Lubrication Chart

This chart is only a reference, always consult the Owners Manual of the Engine, PTO, etc for actual recommendations

(Use Hour Meter as a Guide)

MAINTENANCE	INTERVAL					
	Daily	First 8 Hours	Every 25 Hours	Every 50 Hours	Every 100 Hours	Every 200 Hours
Check and add engine oil, coolant and fuel*	●					
Check for loose nuts or bolts	●					
Check for fuel, oil and coolant leakage	●					
Check or clean air intake screen*	●					
Lubricate Impeller Shaft Flange Bearings	●					
Check Lug Nuts and Tire Pressure / Condition	●					
Check Trailer Safety Chains and Hitch	●					
Check Tow Bar for Damage or Wear	●					
Clean air cleaner foam element*	●					
Clean air cleaner paper element*	●					
Plug in battery charger (every night)	●					
Change engine oil*		●			●	
Clean and Check Battery and Connections			●			
Check Power Band Tension / Condition			●			
Check Electric Brakes			●			
Check Impeller for Damage, Cracks or Wear			●			
Lubricate Throttle and Choke Cables				●		
Check Blower Housing Interior for Cracks or Wear				●		
Inspect Intake Hose for Damage				●		
Clean and regap spark plug*					●	
Replace oil filter*					●	
Replace air cleaner paper element*					●	
Inspect radiator and hoses*					●	
Check fan belt conditions and tension*					●	
Inspect all Duct Work for Cracks, Holes or					●	
Wear					●	
Grease / Inspect Wheel Bearings for Corrosion						●
Change coolant*						●
Check Fuel Tank for Corrosion / Cracks						●

* = see the engine owner's manual for complete details

4.3 Lubrication:

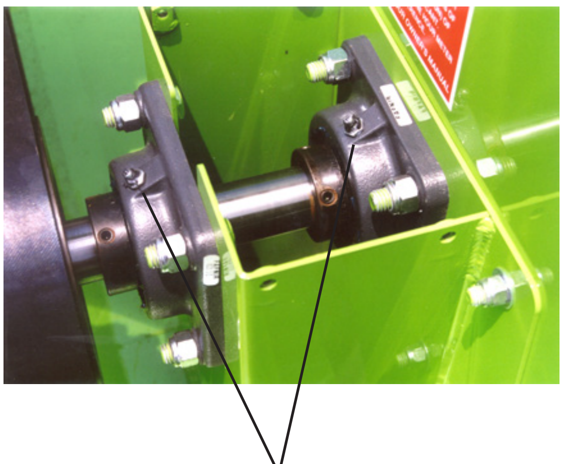
⚠ CAUTION

Remove the negative battery terminal before attempting any lubrication procedures.

⚠ WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before performing any lubrication procedures.

Figure 4.3A



Grease Points

NOTE; DO NOT mix different types of grease. The old grease MUST BE purged before a different type of grease is used. Mixing grease WILL cause premature failure to the bearings.



The following are general lubrication procedures for our standard units. Any special or custom built units may have other lubrication procedures not directly mentioned in this manual. Please consult ODB before any lubricating procedures not specifically mentioned in this manual.

Proper lubrication of your unit correlates directly to how long your unit will last. A properly maintained unit will last much longer than a unit that is not maintained properly. **NOTE:** Always lubricate bearings at the end of each work day. This will displace any moisture in the bearings. Also lubricate thorougly before extended shutdown or storage.

Lubrication Points:

1. **Drive Bearings (if equipped) (figure 4.3a):** These bearings are critical components of the belt-driven units. These bearings should be greased every 10 hours with approximately two strokes from the average hand pump grease gun. The type of grease used in these bearings are also critical to the performance of the bearings. A multi-purpose, heavy-load, high-temperature, moisture resistant #2 grease is required for the drive bearings. ODB recommends Mantek Elite Supreme #1 WG Extreme Duty multi-purpose grease.. Other premium quality grease that matches the above requirements may be used but after years of testing ODB recommends the Elite Supreme grease.

4.3 Lubrication, continued;

Lubrication Points, continued;

2. **Trailer Wheel Bearings (figure 4.3b):** All of ODB's units are equipped with oil lubricated hubs. Periodically fill the hub with a high quality hypoid gear oil to the level indicated on the clear plastic oil cap. The oil can be filled from either the oil fill hole in the hub or through the rubber plug hole in the cap itself.

Figure 4.3b



Oil specifications:

SAE 90 Hypoid Gear (Hypoid Rear Axle Gear Oil)

Approved Sources:

Union Oil Co.........................Union MP, Gearlube - LS
Exxon Co......................................Gear OIl GX80W-90
Mobil Oil Corp........................Mobilube SHC 75W-90
Penzoil Prod. Co.........Multipurpose Gear Lubr. 4092
............................or Mulitpurpose Gear Lubr. 4096

For any questions concerning wheel lubrication please consult the axle owner's manual supplied with your leaf collector or contact ODB.

Figure 4.3c



3. **Hitch and Tongue (figure 4.3c):** The hitch and hitch ring should be checked and lubricated daily to minimize wear. Apply grease and/or SAE30 weight oil wherever applicable. While lubricating, make sure all components are in good working order and not worn in any way.

Figure 4.3d



Figure 4.3e

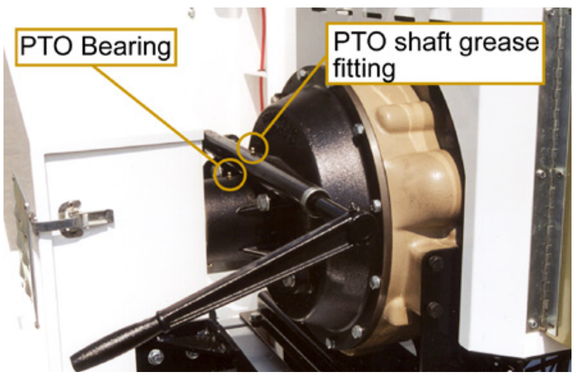


Figure 4.3f



4.3 Lubrication, continued;

Lubrication Points, continued;

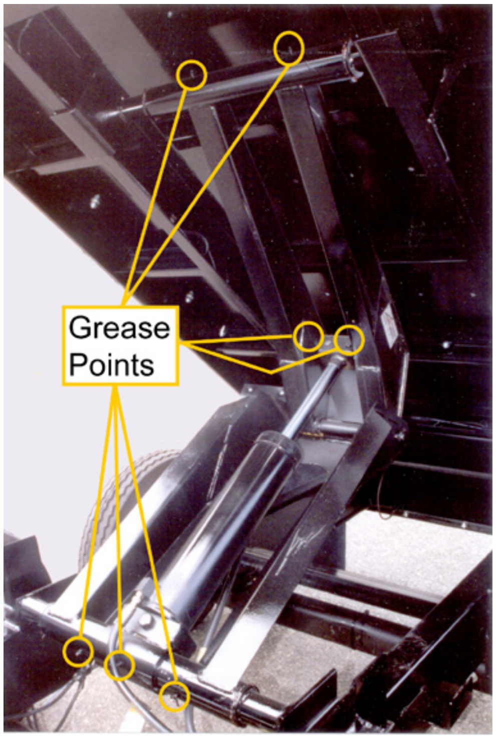
4. **Boom Swivel and Barrell Assembly Bearings (figure 4.3d):** These bearings are on most of ODB's model leaf machines after 1996. Grease the boom bearings once every week with a multi-purpose moisture resistant #2 grease.

5. **PTO Bearing & PTO Shaft Fitting (figure 4.3e):** The PTO crossover shaft and linkage should be lubricated with high temperature lithium base #2 lubricant after 200 hours of operation.
6. **Hinge and Friction Points:** Leaf vacuum operation and longevity can be improved by keeping hinges and friction points lubricated. ODB recommends that lubricaton be performed weekly. Use SAE30 weight oil on hinges and a premium grade, high temperature lithium based EP#2 grease on friction points.
7. **Parking Jack (figure 4.3f):** Remove the top cover and lubricate the gears inside with a standard gear grease. This should be done at the beginning of each season. Proper lubrication will make hitching the leaf collector much easier.

4.3 Lubrication, continued;

Lubrication Points, continued;

Figure 4.3g



⚠WARNING

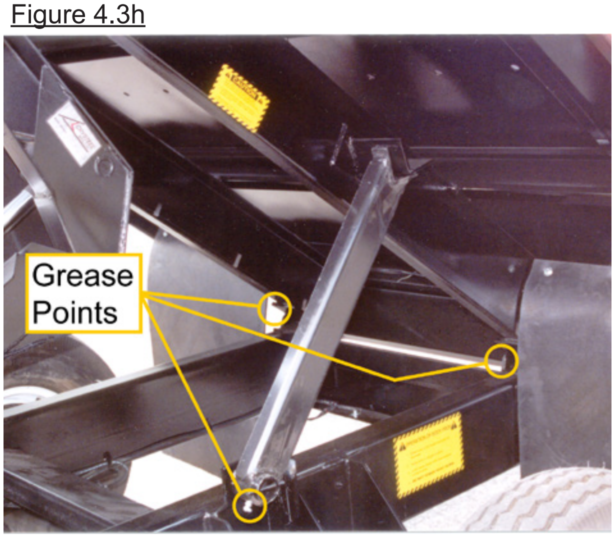
Never go under the dump body unless the body is empty and the body prop(s) is in the proper position.

⚠WARNING

The body prop is designed and intended to support an EMPTY truck body in the raised position. Unload the body before using the body prop(s).

8. **Hydrauilc Hoist Fittings (figure 4.3g):** Raise and support the dump body as detailed in section 3.2. Lubricate the fittings at least every 200 hours of operation with a #2 high grade grease. There are tremendous forces on the bearing sufaces within the hoist frame. It pays to be generous with the grease gun, to insure proper operation and long life.
9. **Hoist Hinge and Body Prop(s) Fittings (figure 4.3h):** Each hinge pivot has a grease fitting that needs lubrciating every 200 hours. The body prop(s) has a fitting at the pivot area as shown in figure 4.3h.

Figure 4.3h



4.4 Preventative Maintenance

CAUTION

Remove the lead spark plug wires before attempting any maintenance procedures.

WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before performing any maintenance procedures.

The following are general preventative maintenance procedures for our standard units. Any special or custom built units may have other preventative maintenance procedures not directly mentioned in this manual. Please consult ODB before doing any preventative maintenance procedures not specifically mentioned in this manual.

Proper preventative maintenance of your unit, just like lubrication, correlates directly to how long your unit will last. A properly maintained unit will last much longer than a unit that is not maintained properly.

Preventative Maintenance:

1. **Engine Oil:** Change the oil and oil filter according to schedules provided in your engine's owner's manual (EOM). The engine oil level should be checked every day. The level should be checked after the engine has been stopped for a period of time. This will allow the oil to drain back into the oil pan, allowing a better indication of the true oil level. If the level is low, see the engines owner's manual for the correct type of oil.

2. **Engine Coolant:** Check the coolant level before starting the unit each day. The coolant level should not be less than one inch below the top of the radiator.

CAUTION

NEVER check the engine coolant when the engine is hot. Allow the engine to cool at least one hour before checking the coolant. Check the engine owner's manual for instructions. ALWAYS wear eye and hand protection when working with the radiator.

4.4 Preventative Maintenance, continued;

3. **Engine Radiator:** The engine radiator on a leaf vacuum becomes clogged with dust and debris frequently because of the nature of the job. If the radiator is not cleaned properly it WILL cause improper cooling and WILL eventually cause serious damage to your engine. The debris accumulating on the radiator can be lessened by lowering the RPM on the engine to a level just enough to vacuum the leaves. The higher the RPM the more dust that is put into the air. Also, it may be necessary to put mesh or tarps on the top of the leaf box container to reduce the debris and dust. If this is done, make sure there is enough air ventilation on the box so the box is not blown apart. Proper belt condition and coolant mix-ratio, as well as coolant conditioners, are all critical to proper engine cooling. See the engines owner's manual for specifics on coolant mixture ratios and conditioners. The radiator should be inspected and cleaned with compressed air everyday at the very least.

⚠ DANGER

NEVER attempt to clean or inspect the radiator with the engine running or while the engine is HOT. Allow the engine to cool at least one hour before mantaining the radiator. Check the engine owner's manual for instructions. ALWAYS wear eye and hand protection when working with the radiator.

4. **Engine Air Cleaner:** Due to the large amounts of dust generated in collection leaves, it is critical to your engine's life that the pre-cleaner and air filter be maintained properly. The pre-cleaner (if equipped) should be cleaned at least daily of any debris that has accumulated. If conditions warrant it should be cleaned more. The air filter should be checked daily and should be replaced at the first sign of it being dirty. See the engine's owner's manual for detailes. It is a good idea to clean out the air filter housing once a week to clean any dust debris that may have accumulated.

5. **Tires and Wheels:** Tires and wheel lug nuts should be checked on a daily basis. Tires should be checked for excessive wear and proper air pressure. Check the side wall of the tire for proper inflation pressure. Torque all 1/2" diameter lug nuts from 90 to 120 foot pounds. Torque all 5/8" diameter lug nuts from 175 to 225 foot pounds. Consult the axle manufacturers owner's manual for more detailed information.

4.4 Preventative Maintenance, continued;

6. **Trailer Brakes (if equipped):** Most of the newer ODB leaf vacuums have electric brakes on the axle(s). It is critical that these brakes work properly. The trailer's brakes should be checked daily, before leaving the equipment yard, for proper operation. The trailer brakes are designed to work in synchronization with your tow vehicles brakes. Never use your tow vehicle or trailer brakes alone to stop the combined load. The synchronization between the tow vehicle and the leaf vacuum is accomplished through the brake controller and needs to be set correctly. Please read the brake controllers manual and the axle owner's manual for these procedures.

⚠WARNING

DO NOT tow the leaf vacuum with damaged or non-operating brakes. Check the brakes daily for proper operation.

The brakes should be adjusted after the first 200 miles of operation when the brake shoes and drums have "seated" and at 3,000 mile intervals, or as use and performance requires. The adjustment procedures are beyond the scope of this manual, please see the axle owners/service manual for specific instructions.

The trailer brakes should be inspected and serviced at yearly intervals or more often as use and performance requires. Magnets and shoes must be changed when they become worn or scored thereby preventing adequate vehicle braking. Again, see the axle owner's/service manual for specific procedures.

7. **FUEL TANK:** Fill the fuel tank at the beginning of the work shift leaving a gap of at the top of the tank for expansion of fuel. A full fuel tank will reduce the possibility of condensation forming in the tank and moisture entering the fuel lines. Check the fuel lines daily for cracks, holes or tightness.

4.4 Preventative Maintenance, continued;

⚠ CAUTION — **ALWAYS wear eye and hand protection when working with the battery.**

8. **Battery:** ODB's units are supplied with "maintenance free" batteries so there is no need to check fluid levels but the battery terminals should be checked daily for corrosion. Remove any corrosion with a wire brush and coat the terminals with light grease or petroleum jelly to reduce the possibility of corrosion. Also check the battery cable for wear all cable connections and battery tie downs to be certain that they are not loose.

9. **Drive Belt (if equipped):** The main drive belt should be checked daily for cracks and for proper tension. If the belt shows any sign of

⚠ CAUTION — **Remove the negative battery cable before opening the belt guard.**

cracking it should be replaced immediately. The proper tension of the belt should be approximately 1/2" deflection when applying a 8 pound pull.

10. **Fasteners:** Fasteners should be checked weekly for the first 30 days and monthly thereafter. They must be in place at all times and properly torqued. For general torque values see the torque chart at the end of this section.

11. **Instrument Panel and Circuit Board:** The instrument panel and circuit board should be cleaned with compressed air daily. Also the circuit board connectors should be wiped clean and have nonconductive grease applied weekly to help maintain solid connections.

12. **Boom Hydraulic Pump:** Check the fluid level daily. If fluid needs to be added, **automatic transmission fluid (ATF)** is recommended. Clean debris and oil off the solenoid and pump daily. A build up of debris can cause premature failure to the pump. Check and tighten all hydraulic fittings making sure there are no leaks.

4.4 Preventative Maintenance, continued;

13. **Hoist Hydraulic Fluid and Filter:** The hoist hydraulic fluid and filter should be changed every 100 hours of operation. The fluid should be completely drained and fresh high quality **ISO 68 non-foaming** hydraulic fluid should be added.

CAUTION

ALWAYS raise and support the box container properly using the steps outlined in this manual.

14. **Exhaust Duct Gasket:** The 1.5" thick gasket should be checked for wear every 200 hours. This gasket creates a tight seal between the box container and the blower housing.

15. **Axle Hangers:** The hanger bolts should be checked periodically for tightness and wear.

16. **Hydraulic Fittings:** Check all hydraulic fittings for leaks and tightness. Any leak could become a hazard, fix immediately.

4.5 Torque Values

<u>INCH</u> BOLT AND CAP SCREW TORQUE VALUES					<u>METRIC</u> BOLT AND CAP SCREW TORQUE VALUES						
TYPE	SAE GRADE					CLASS					
	5		8			8.8 or 9.8		10.9		12.9	
HEAD MARK					HEAD MARK						
SIZE(D)	LB-FT		LB-FT		SIZE(D)	LB-FT		LB-FT		LB-FT	
	Lub*	**Dry***	**Lub***	**Dry***		**Lub***	**Dry***	**Lub***	**Dry***	**Lub***	**Dry***
1/4"	7	9	10	12.5	M6	6.5	8.5	9.5	12	11.5	14.5
5/16"	15	18	21	26	M8	16	20	24	30	28	35
3/8"	26	33	36	46	M10	32	40	47	60	55	70
7/16"	41	52	58	75	M12	55	70	80	105	95	120
1/2"	63	80	90	115	M14	88	110	130	165	150	190
9/16"	90	115	130	160	M16	140	175	200	255	240	300
5/8"	125	160	175	225	M18	195	250	275	350	325	410
3/4"	225	280	310	400	M20	275	350	400	500	460	580
7/8"	360	450	500	650	M22	375	475	540	675	625	800
1"	540	675	750	975	M24	475	600	675	850	800	1000
1-1/8"	675	850	1075	1350	M27	700	875	1000	1250	1150	1500
1-1/4"	950	1200	1500	1950	M30	950	1200	1350	1700	1600	2000
1-3/8"	1250	1550	2000	2550	M33	1300	1650	1850	2350	2150	2750
1-1/2"	1650	2100	2650	3350	M36	1650	2100	2350	3000	2750	3500

***Lub** means coated with a lubricant such as engine oil, or fasteners with phospate or oil coatings. "Dry" means plain or zinc plated without any lubrication.

DO NOT use these values if a different torque value or tightening procedure is given for a specific application. Torque values listed are for general use only. Check tightness of fasteners periodically.

Make sure fastener threads are clean and that you properly start thread engagement. This will prevent them from failing when tightening. Fasteners should be replaced with the same or higher grade. If higher grade fasteners are used, these should only be tightened to the strength of the original.

Tighten plastic insert or crimped steel-type lock nuts to approximately 50 percent of the dry torque shown inthe chart, applied to the nut, not the bolt head.

4.6 Quick Reference Maintenance Chart:

CAUTION

Only properly trained personnel should perform maintenance or repair on this equipment. Consult your dealer before performing any maintenance procedures that is not specificially covered in this manual. Improper maintenance or repair may void any and all warranties on this equipment.

NOTE: THIS CHART IS FOR REFERENCE ONLY, CONSULT THE ENGINE'S OWNERS MANUAL FOR SPECIFIC DETAILS. FOR CUMMINS A SERIES ENGINES ONLY.

ITEM	
Fuel Requirement	Use ASTM No.2D diesel fuel with min.Cetane number of 40
Fuel Capacity	20 gallons
Engine Oil:	
Grade	API service classicfication; CF-4,SG, or SJ class.
Viscocity	SAE 15W-40 heavy duty engine oil such as Valvoline Premium Blue (see EOM manual for details)
Capacity	8.0 US qt pan capacity / 8.0 total system capacity
Coolant:	
Type	Permanent type of low-silicate ASTM4985 antifreeze; green in color
Mixture	Water 50%; Antifreeze 50%; (1:1)
Freezing Point	-35 degrees C (-31 degrees F)
Amount	1.5 gallons
Thermostat	
Beginning Opening	82 degrees C (180 degrees F)
Full Open	95 degrees C (203 degrees F)

WARNING

Improper maintenance or repair CAN result in equipment damage and/or personal injuries.

DANGER

BEFORE CONTINUING, please read and understand the Safety, Pre-operating and Operating sections of this manual before doing any prodcedures in this section.

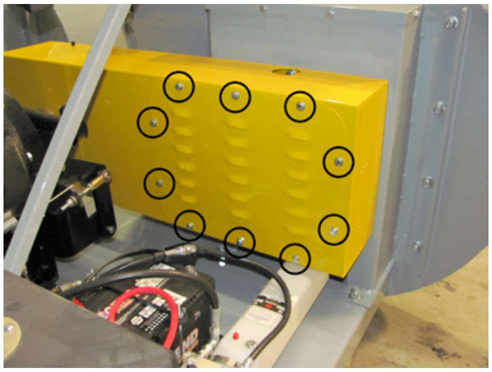
⚠WARNING **Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.**

5.0 SERVICE SECTION

5.0 SERVICE SECTION

5.1 Belt Adjustment / Removal

figure 5.2a



WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before working on the unit.

WARNING

Make sure the negative battery cable is disconnected before opening the blower housing.

figure 5.2b

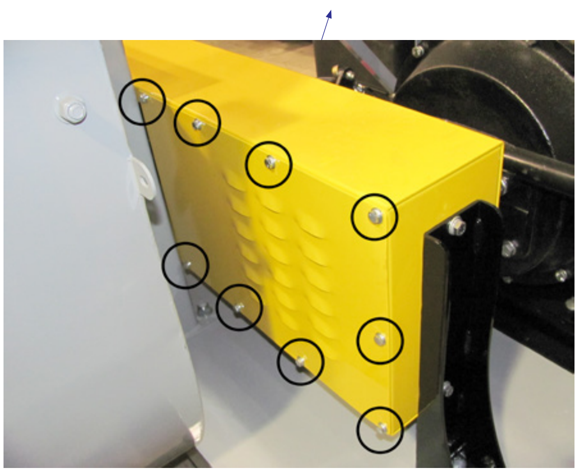
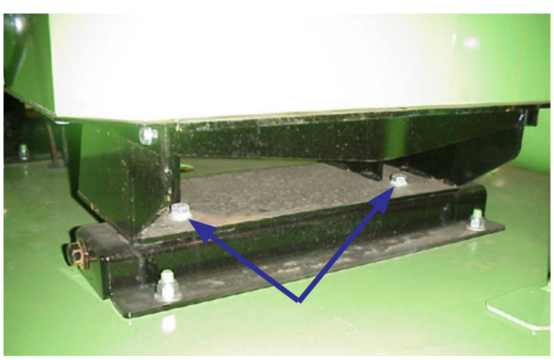


figure 5.2c



Belt Adjustment / Removal Procedure :

Belt adjustment / Removal is made easy by the using the engine adjustment brackets and bolts. Be careful when working around the engine and muffler area, as it may be hot. On a new unit, the belt should be adjusted after the first 30 hours of use and every 100 hours thereafter.

1. Remove the belt guard covers by removing the bolts holding on the covers (FIG. 5.2A & B).
2. Loosen the engine base bolts (Item A on FIG 5.2C), there are 2 on each mount.
3. Then drive the adjuster bolt (Item B on FIG. 5.2C) counter-clockwise to move the engine toward the impeller shaft. This will loosen the belt.

5.1 Replacing the Drive Belt (if equipped), continued;

figure 5.2d



WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before working on the unit.

WARNING

Make sure the negative battery cable is disconnected before opening the blower housing.

Review the safety section of this manual before attempting these procedures.

Belt Adjustment / Installation Procedure :

1. To tighten or install the belt, make sure the two pulleys are lined up. Use a straight edge to make sure (FIG 5.2D). If the pulleys are not lined up loosen one of the pulleys and move the pulley in or out until the two pulleys line up.
2. Tighten the belt by turning the adjuster bolt clockwise until the belt is tight. The correct tension is when the belt deflects 1/2” - 3/4” using an 8 pound pull. DO NOT OVER-TIGHTEN.
3. Re-install the belt guard cover exactly as you removed it.

5.2 Impeller Removal / Installation

CAUTION

Make sure the engine is OFF and the negative battery cable is disconnected before attempting any service procedures.

REMOVAL

1. The blower housing face must be removed to gain access to the impeller. Use an overhead crane or forklift to support the face while removing.
2. Once the face has been removed, remove the shaft protector (Fig. 1 or 2).
3. Saturate the shaft and bushing using a penetrating lubricant to help loosen the bushing. Clean any grease or debris from the bushing and shaft.
4. Remove the 3 bolts attaching the bushing to the impeller.(Fig. 3) Being careful not to break the bolts. If a set screw is on the lip of the bushing, loosen it using an allen wrench.(Fig. 4)
5. Using two of the bolts that were just removed screw those bolts into the threaded holes on the bushing. Drive the two bolts into the bushing.(Fig. 5) This will separate the bushing from the impeller. Alternate from one bolt to the other driving only about a 1/4" at a time to keep the bushing coming out straight. It is imperative to keep the bushing straight to remove it.

IMPORTANT: Be sure to drive the bushing out evenly or it will get in a bind making removal much harder.

6. If the bushing does not come off using the two bolts, drill and tap several additional 3/8-16 holes around the bushing. Using Grade 8, 3/8-16 - 2 inch bolts, alternately drive the bolts 1/4" at a time to remove the bushing. KEEP THE BUSHING STRAIGHT while removing.

IMPORTANT: If additional holes were drilled in the bushing, it can not be reused. It must be be replaced.

7. Once the bushing has been removed use an overhead crane or other suitable device to help lift the impeller out of the blower housing.
8. At this point it would be a good idea to inspect the blower housing liners and blower housing for any damage or wear. Any damage or wear to the liners should be fixed by replacing the liners immediately.

Fig. 1

Direct Drive



Fig. 2

Belt Drive



Fig. 3

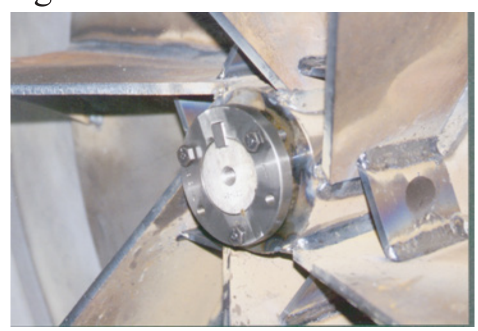


Fig. 4

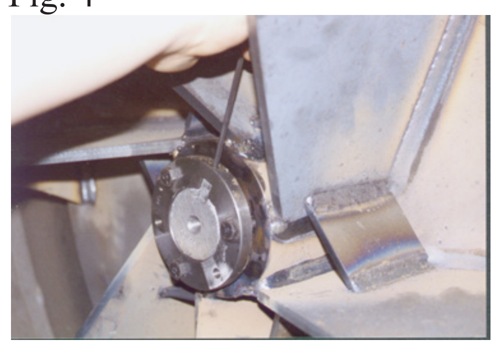
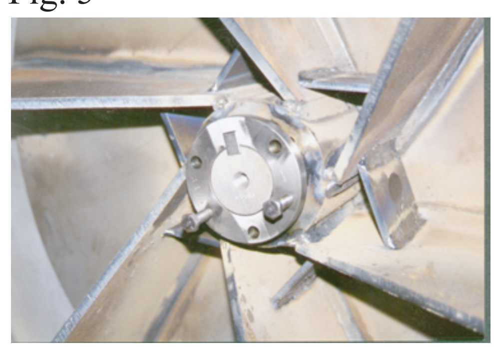


Fig. 5



5.2 Impeller Removal / Installation, cont.;

CAUTION **Make sure the engine is OFF and the negative battery cable has been disconnected before attempting any service procedures.**

Fig. 1



INSTALLATION

1. Clean the shaft of any debris and remove any rust using a 120 grit emory cloth.
2. Put a generous coat of anti-sieze compound completely around the shaft. This will aid in removing the bushing and impeller the next time.

IMPORTANT: Use an anti-sieze compound on the shaft and bushing to keep the bushing from "welding" itself to the shaft. This makes removal much easier.

3. Using an overhead crane or other suitable lifting device lift the impeller on to the shaft. Turn the impeller to align the keyways of the shaft with the keyway in the impeller.
4. Insert key into the keyway. A light sanding of the keyway may be needed, as well as a few light blows with a rubber mallet.
5. Apply a generous coat of anti-sieze compound to the outside of the bushing being sure to cover any area that will come in contact with the impeller.
6. Tap the bushing onto the shaft aligning the keyways.
7. **BELT DRIVE UNITS:** Align the bushing and key to be flush with the end of the shaft (Fig 1).
DIRECT DRIVE UNITS: The bushing and key should protrude from the shaft about 1/2 inch (Fig. 2).
8. Put the 3 bolts into the non-threaded holes and drive them into the impeller holes evenly. Alternate between the three bolts as you drive the bolts in. Torque to 40 to 50 lbs/ft. There should be a gap of 3/8" to 1/2" between the bushing and the impeller.

IMPORTANT: Slowly spin the impeller by hand making sure that the back of the impeller is not hitting any of the bolt heads located at the back of the blower housing.

9. If the bushing has a set screw on it, tighten the screw snug with an allen wrench (Fig. 3). This will help keep the key in place.
10. Install the shaft protector on to the shaft (Fig. 4).

Fig. 2



Fig. 3

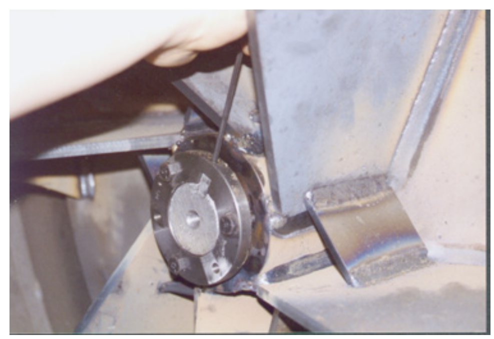


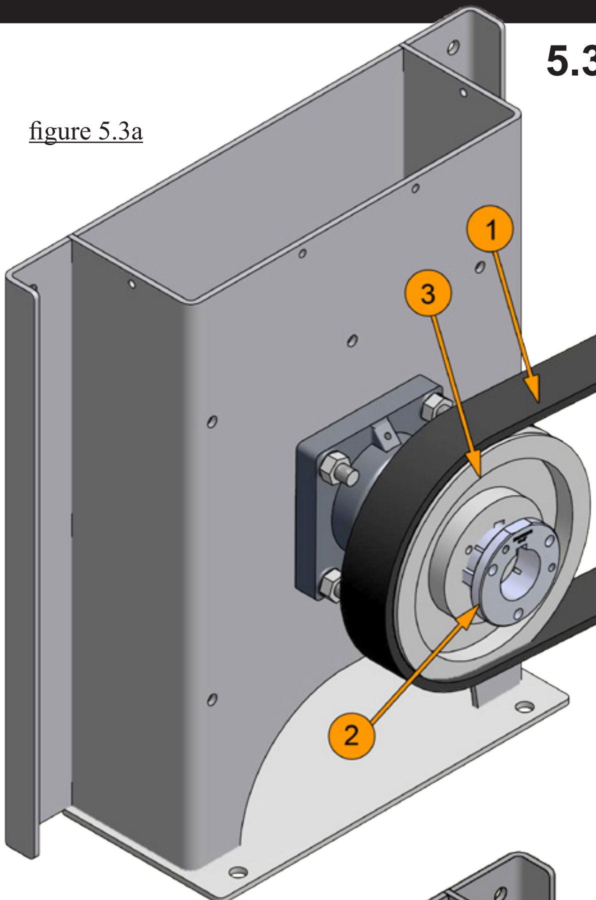
Fig. 4

Belt Drive



5.3 Impeller Bearings Removal / Installation

figure 5.3a



⚠WARNING

Thoroughly read and understand the safety and pre-operating sections of this manual before working on the unit.

⚠WARNING

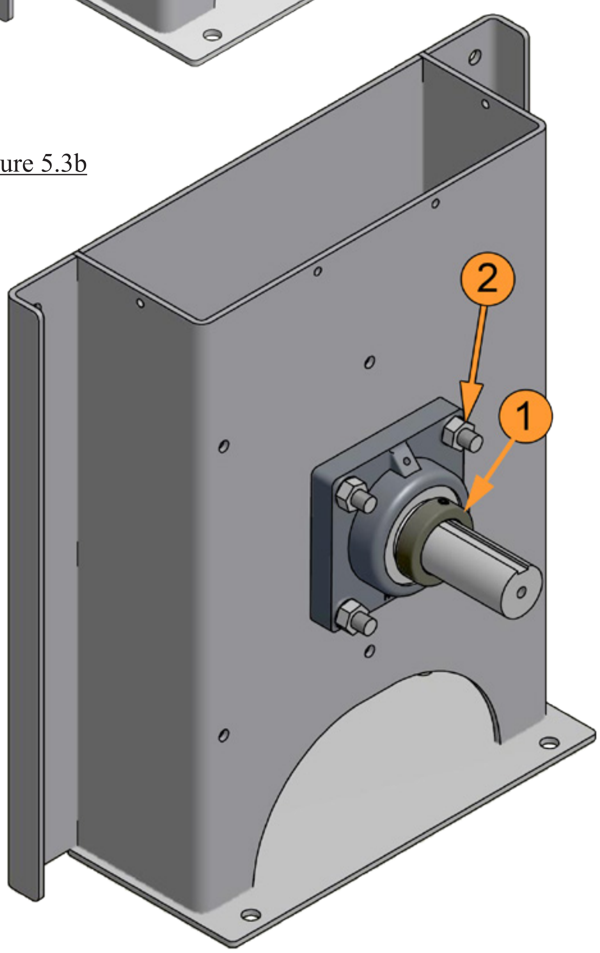
Make sure the negative battery cable is disconnected before opening the blower housing.

Review the safety section of this manual before attempting these procedures.

<u>**Removing Drive Bearings (refer to 5.3a thur 5.3d):**</u>

1. Remove the impeller and drive belt as described in this manual.
2. If the bearings have not "seized" onto the shaft then removal is straightforward.
3. Loosen the pulley (item# 2, fig. 5.3a) by removing the bushing bolts (item# 3, fig. 5.3a).
4. Remove the bearing collar (Item# 3, fig. 5.3b), if equipped, at the rear of the front bearing (the bearing closest to the blower housing).
5. On the rear bearing (closest to the engine) loosen the set screw on the bearing lock collar (Item# 1, fig. 5.3b)
6. Pull the shaft out toward the blower housing. The bearing plate, front bearing and pulley should come out in one unit.
7. If the shaft doesn't pull out easily, lubricate the shaft generously where the shaft goes through the bearings. If the shaft still doesn't come out, the final solution is to cut the shaft in half.
8. Once the shaft is out, remove the front bearing from the shaft by using steps 5 and 6.

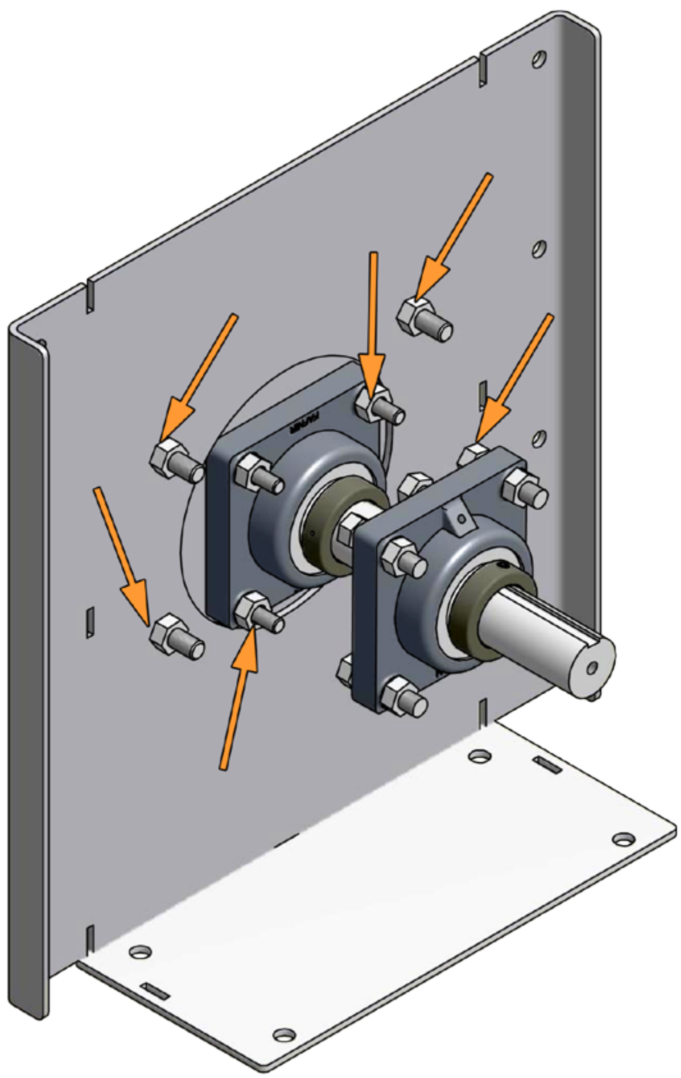
figure 5.3b



5.3 Impeller Bearings Removal / Installation, continued

Review the safety section of this manual before attempting these procedures.

figure 5.3c
Shown with part of pedistal cut away

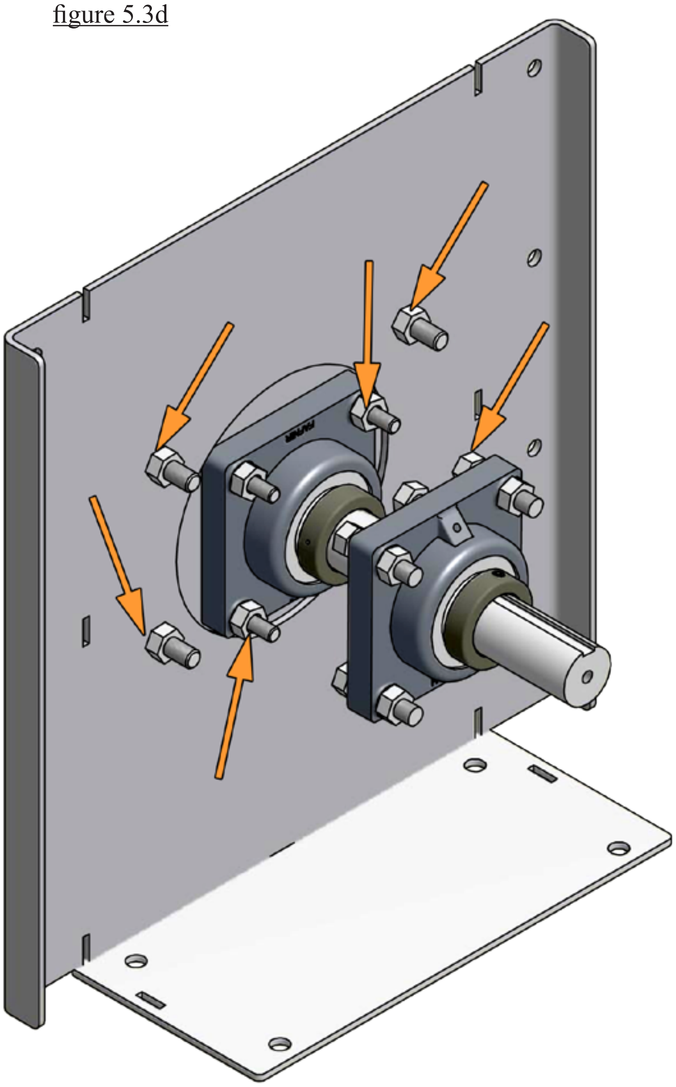


Installing the Drive Bearings:

1. Make sure the shaft is clean and remove any burrs.
2. Bolt up the rear bearing (closest to the engine) to the frame.
3. Bolt the front bearing to the bearing plate
4. Bolt the bearing plate (fig. 5.3c) up to the blower housing and bearing frame.
5. Slide the shaft through the front bearing, making sure the front locking collar is slid on to the shaft.
6. Once the shaft is through the front bearing, install the pulley onto the shaft, but don't tighten it until the bearings have been installed and your sure the two pulleys are lined up correctly.
7. Slide the shaft through the rear bearing (closest to the engine). Make sure the front locking collar is put on before the bearing.
8. Once the shaft is in place, lock down the bearings:
9. Starting with the rear bearing (closest to the blower housing) install the rear collar on the blower housing side (figure 5.3b).
10. Push the set collar up to the bearing.

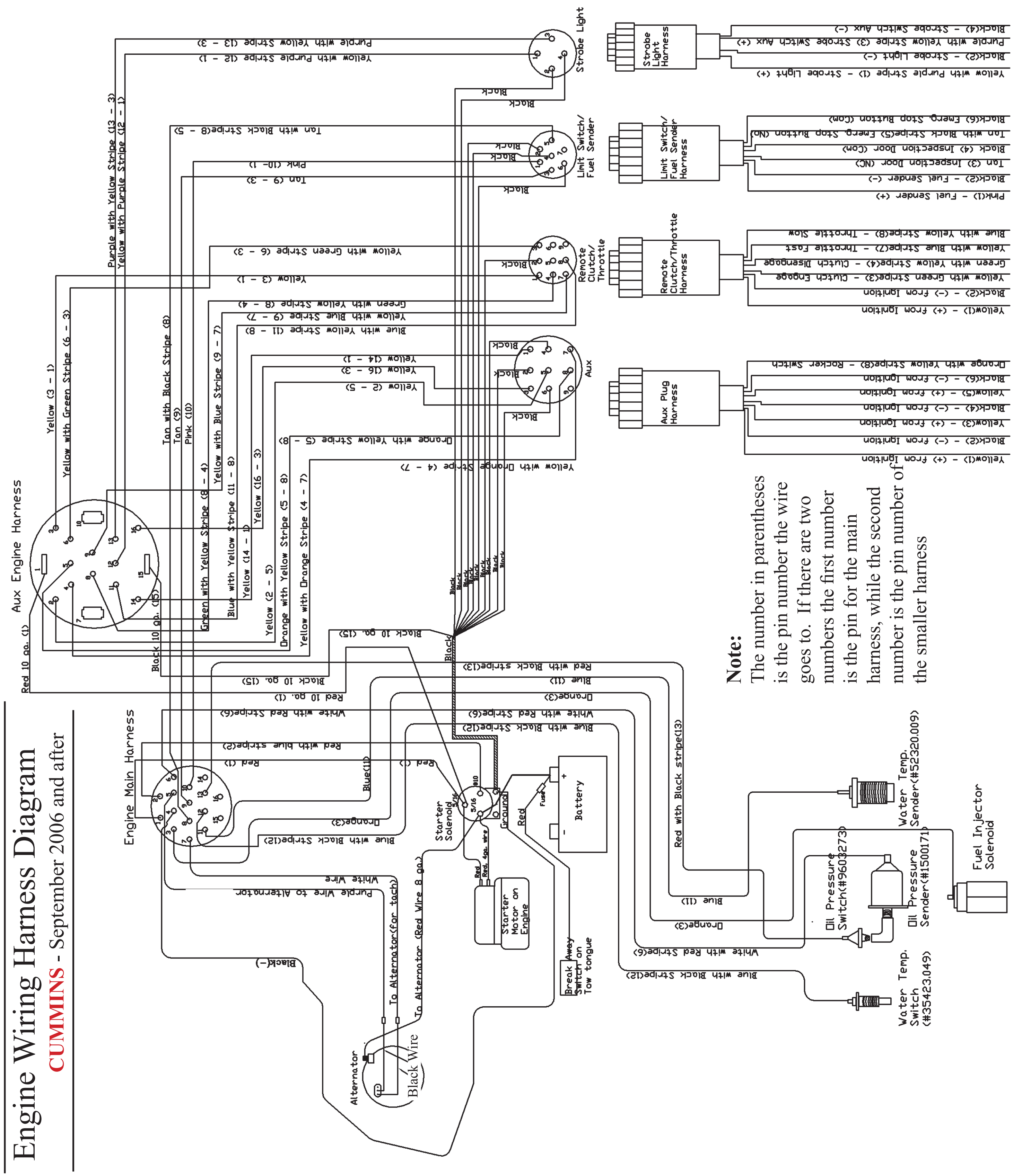
5.3 Impeller Bearings Removal / Installation, continued

figure 5.3d



11. Tighten the set screw.
12. Install the front locking collar sliding the locking collar up to the bearing and the turn the collar clockwise until is slips over the inner ring extension and engages the eccentric. Turn by hand until the parts are locked together.
13. Place a punch or drift in the blind hole in the collar and strike it sharply to the lock the collar and ring tightly together
14. Tighten the set screws with an Allen wrench until the set screw stops.
15. Do steps 10-14 for the other bearing also.
16. Line up the pulleys and tighten the busing.
17. Re-install the belt guards and impeller as described earlier.

5.4 Main Wiring Diagram



5.5 Circuit Board Wiring Diagram

The circuit board has traces on 2 layers - the top and bottom.

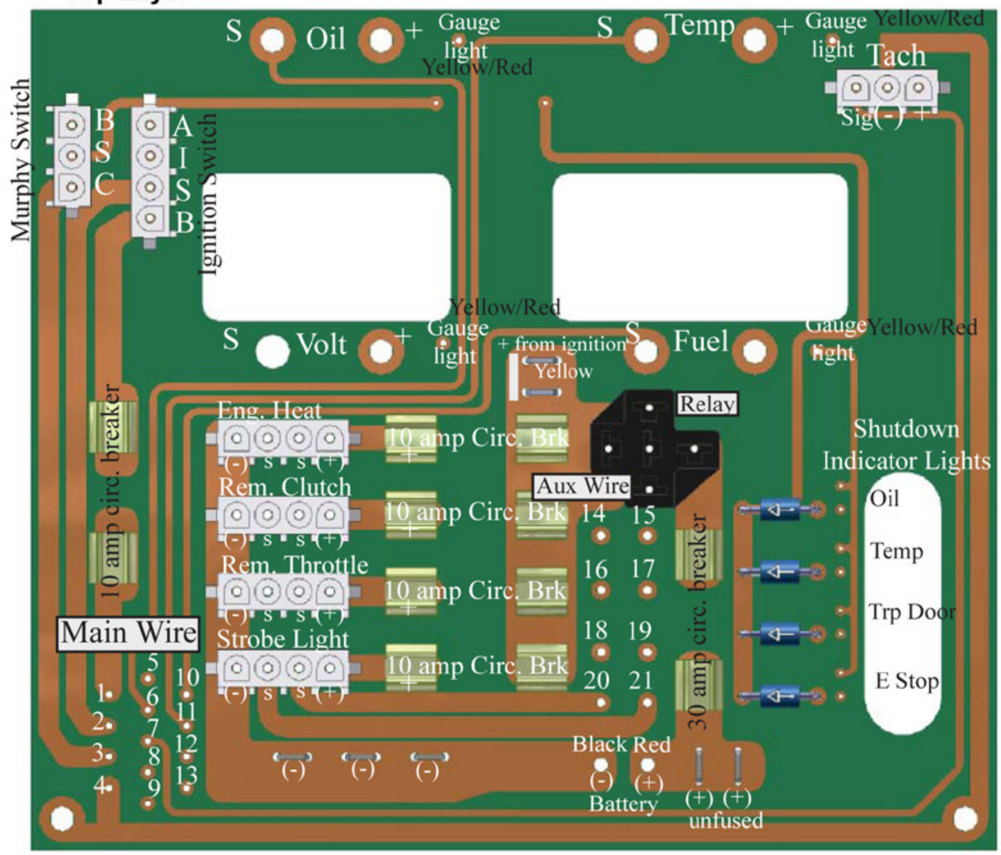
Main Plug Wire ID's

1	+ from Battery (Red)
2	Starter + (Red/Blue)
3	Fuel Sol./Col + (Orange)
4	Ground (Black)
5	Alt Energize + (Purple)
6	Oil Signal (White/Red)
7	Tach Signal (White)
8	E Stop Sig. (Tan/Black)
9	Insp. Door Sig. (Tan)
10	Fuel Level Sig. (Pink)
11	Temp Sig. (Blue)
12	Temp Shtdwn Sig (Blue/Blk)
13	Oil Shutdown Sig. (Red/Blk)

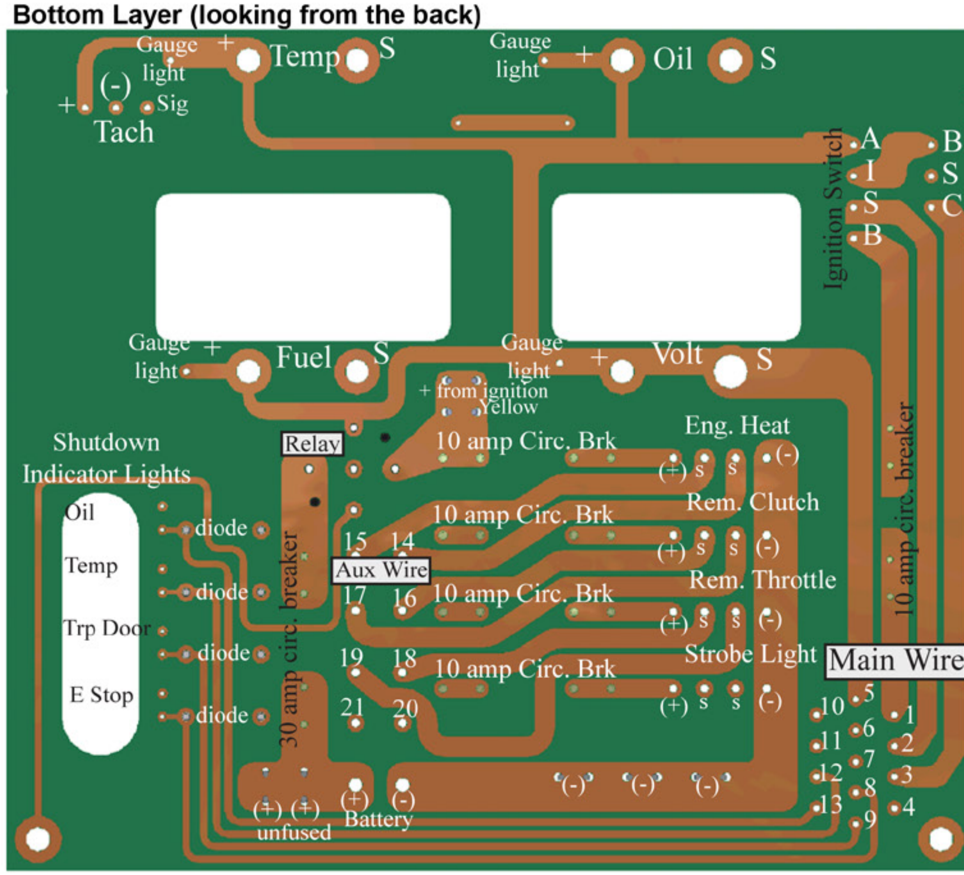
Aux Plug Wire ID's

14	Eng Heat (+) (Yellow/Orange)
15	Eng. Heat Aux (Orange/Yellow)
16	Clutch Engage (Yellow/Green)
17	Clutch Disengage (Green/Yel)
18	Throttle Fast (Yellow/Blue)
19	Throttle Slow (Blue/Yellow)
20	Strobe Light + (Yellow/Purple)
21	Aux Light + (Purple/Yellow)

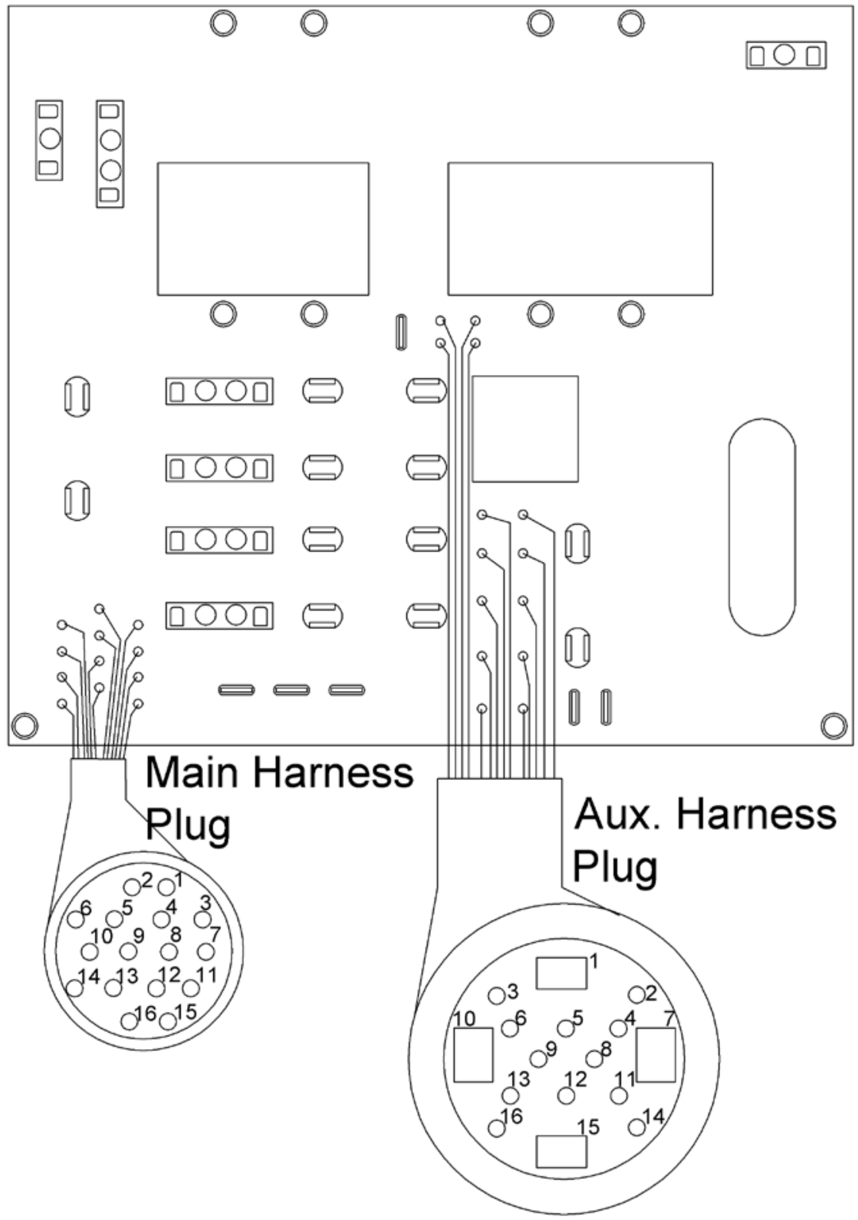
Top Layer



Bottom Layer (looking from the back)



5.6 Main Circuit Board Plug Diagram



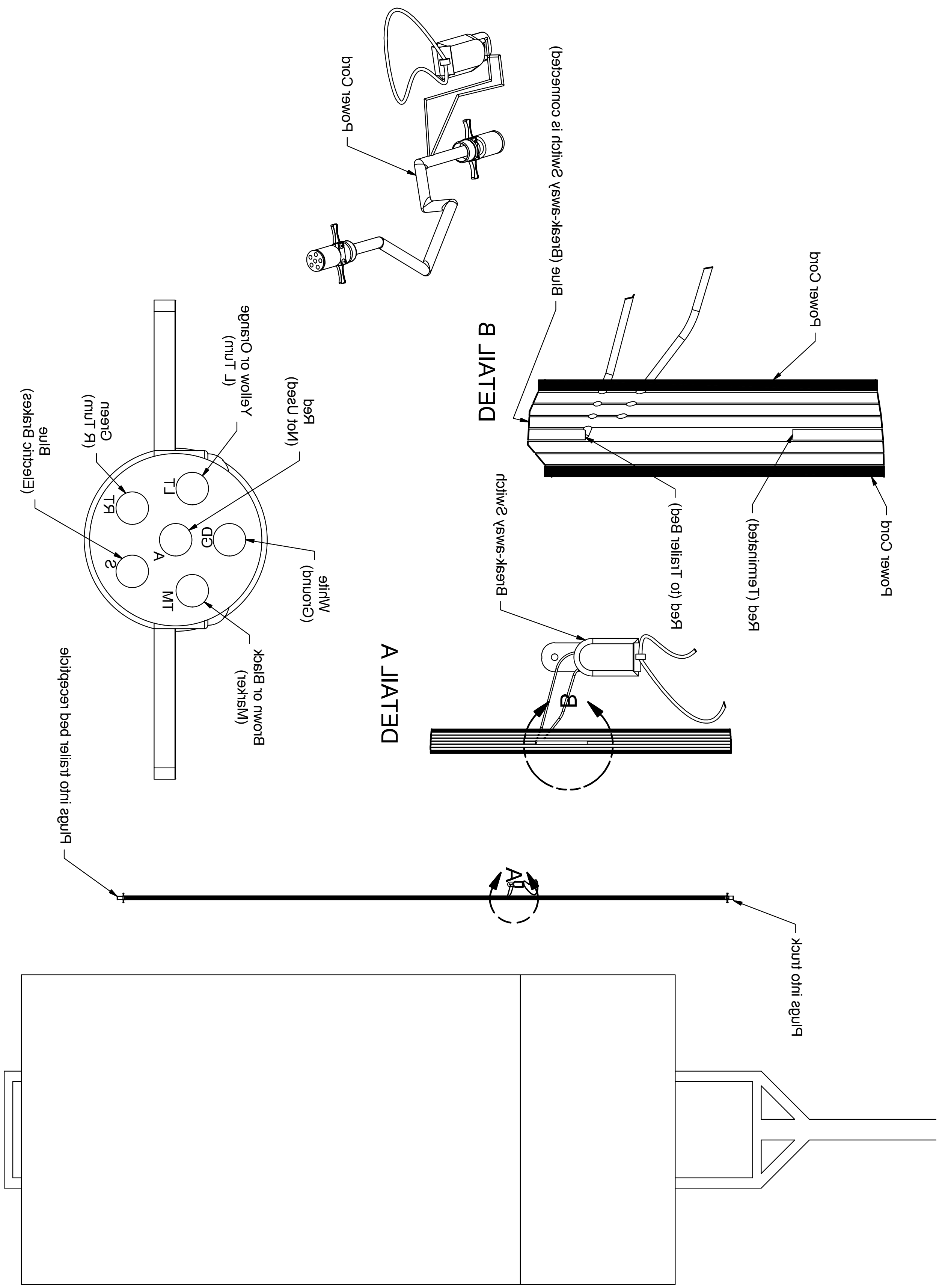
Main Harness Plug

Pin#	Description
1	Red + from battery
2	Red / Blue stripe - starter +
3	Orange - Fuel Sol./Col +
4	Black - Ground
5	Purple Alt Energize +
6	White / Red stripe Oil Signal
7	White - Tach Signal
8	Tan / Black stripeE Stop Sig.
9	Tan - Insp. Door Signal
10	Pink - Fuel Level Signal
11	Blue - Temp Signal
12	Blue/Black Temp Shtdwn Sig
13	Red/Black Oil Shutdown Sig.
14	Empty
15	Empty
16	Empty

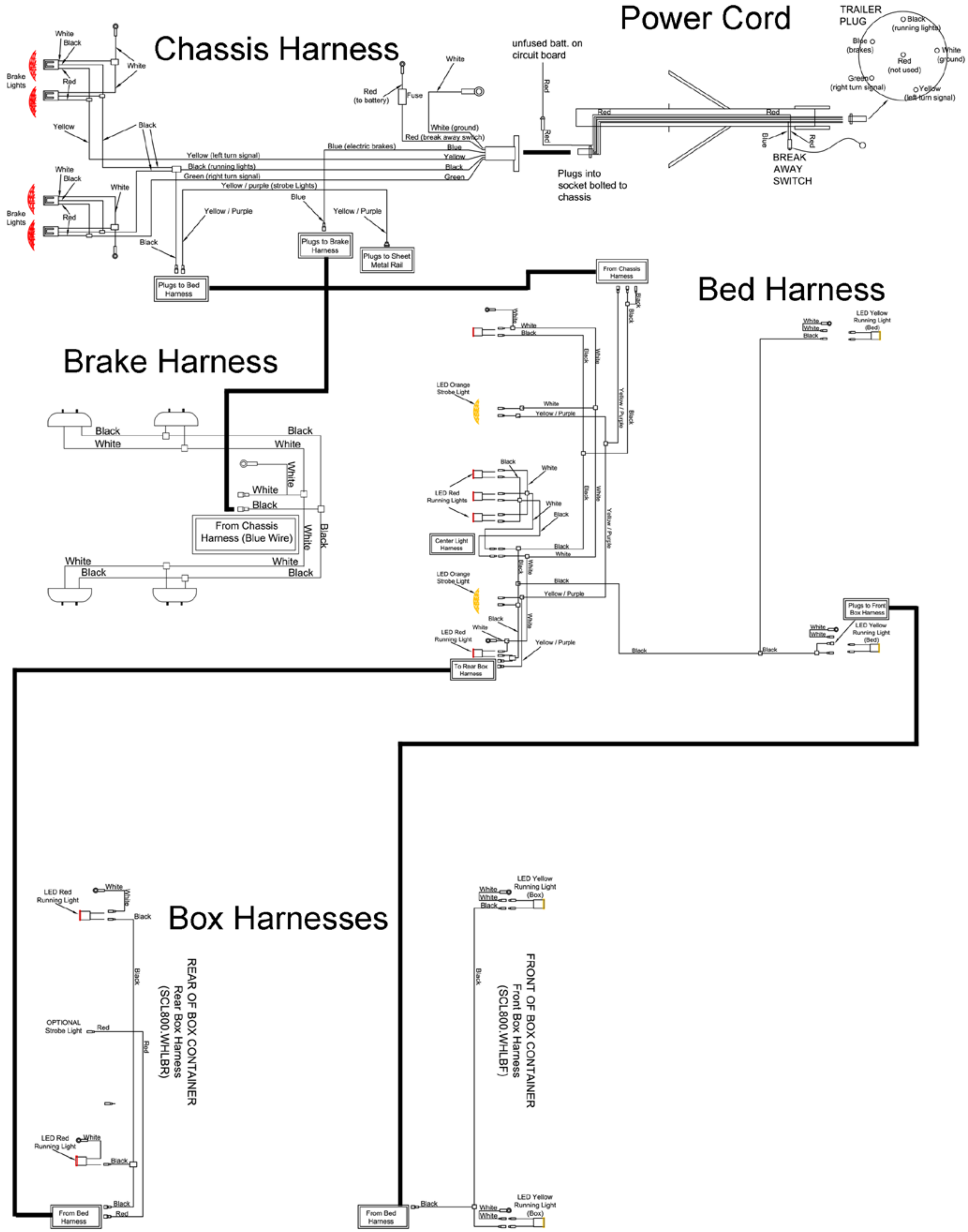
Aux. Harness Plug

Pin#	Description
1	Red + from battery
2	Yellow - Aux Plug harness
3	Yellow - Remote Throttle Har
4	Yellow / Orange stripe-Aux har
5	Orange / Yellow stripe-Aux har
6	Yellow / Green stripe-Clutch Eng
7	Empty
8	Green / Yellow stripe-Clutch Diseng
9	Yellow / Blue stripe-Throttle Fast
10	Empty
11	Blue / Yellow stripe-Throttle Slow
12	Yellow / Blue stripe-Strobe +
13	Purple / Yellow stripe-Strobe Sw+
14	Yellow - Aux Harness
15	Black - battery
16	Yellow - Aux Harness

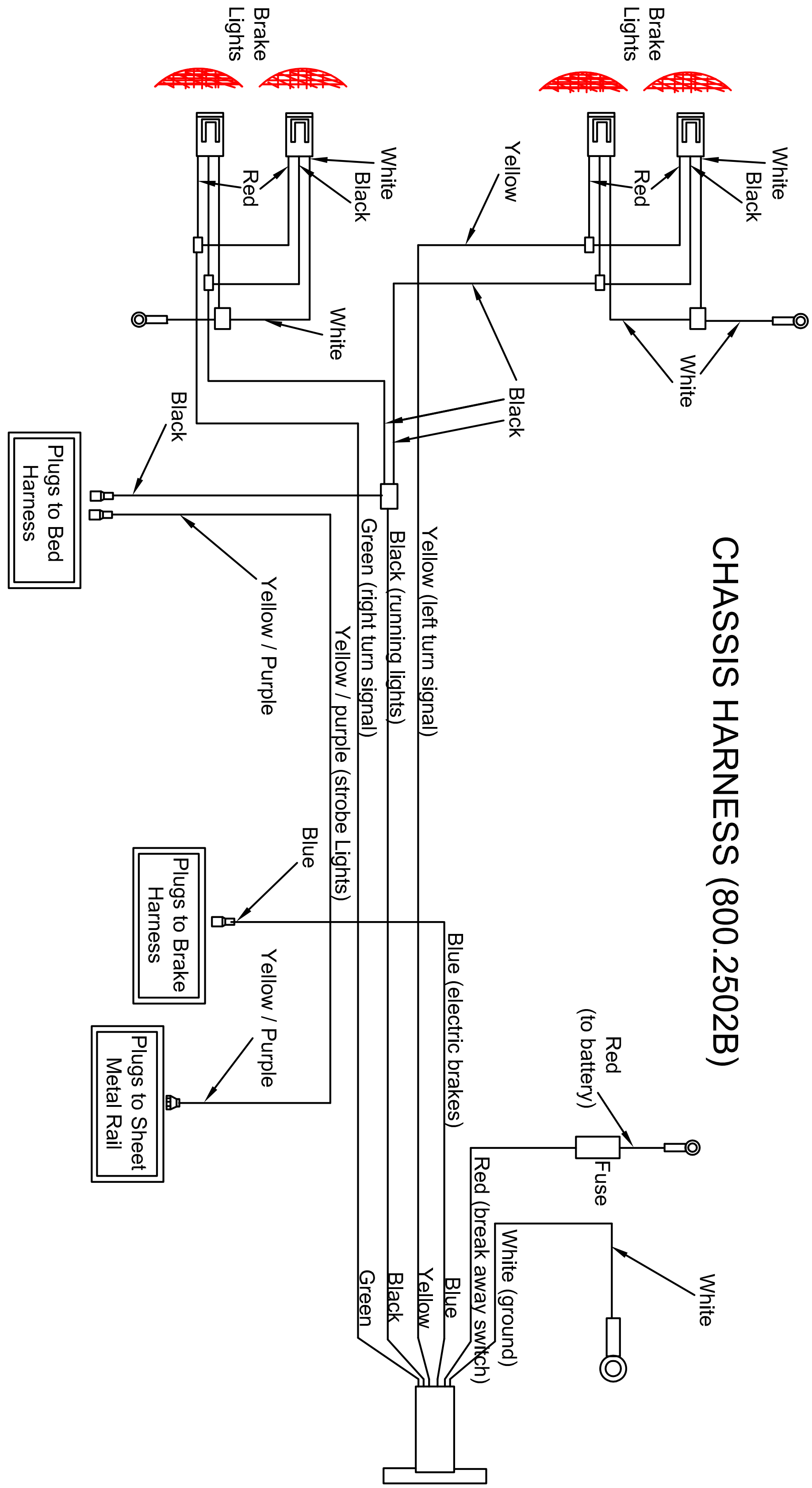
5.7 Trailer Plug Wiring Diagram



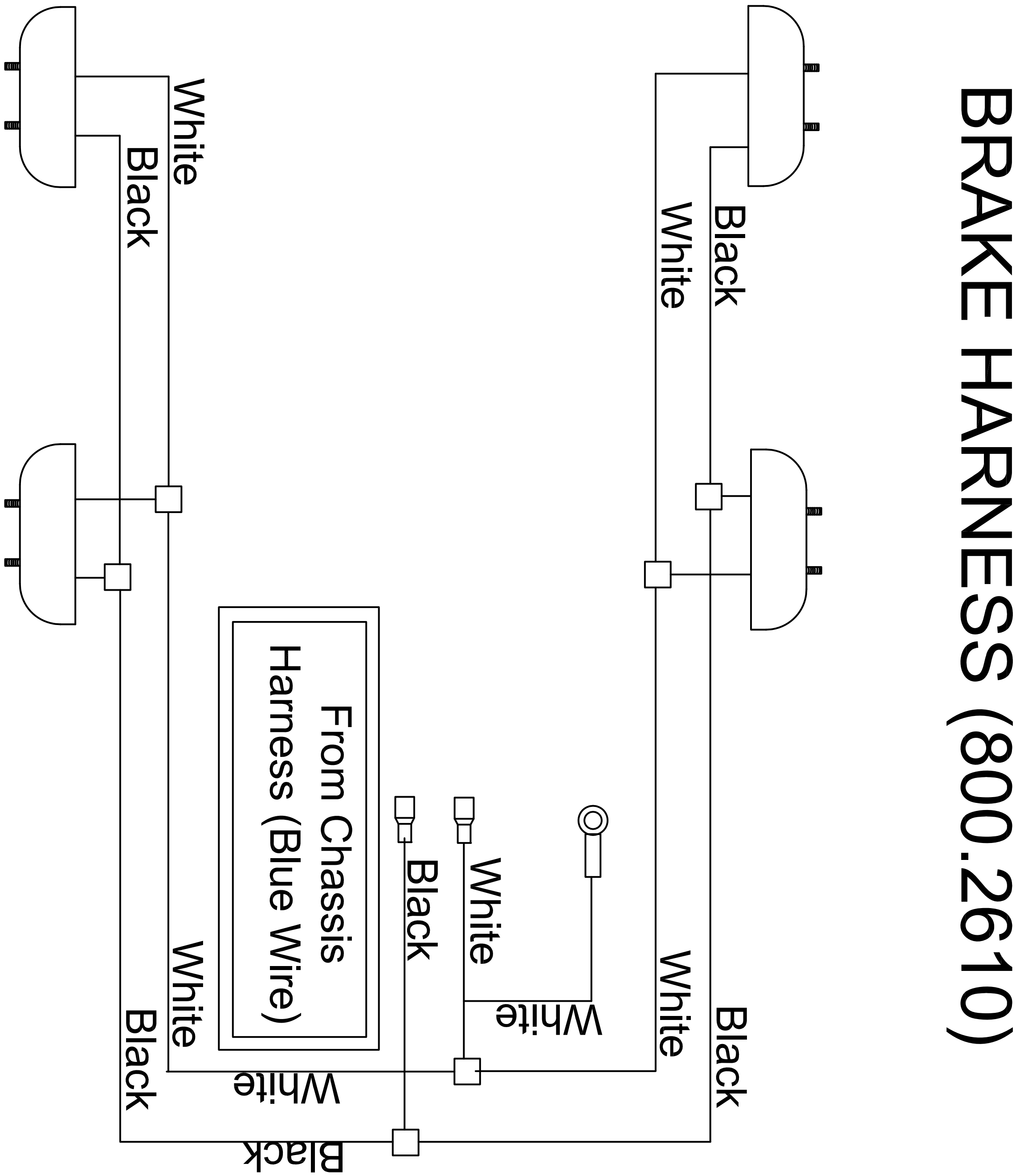
5.8 Trailer Bed Wiring Harness Diagram



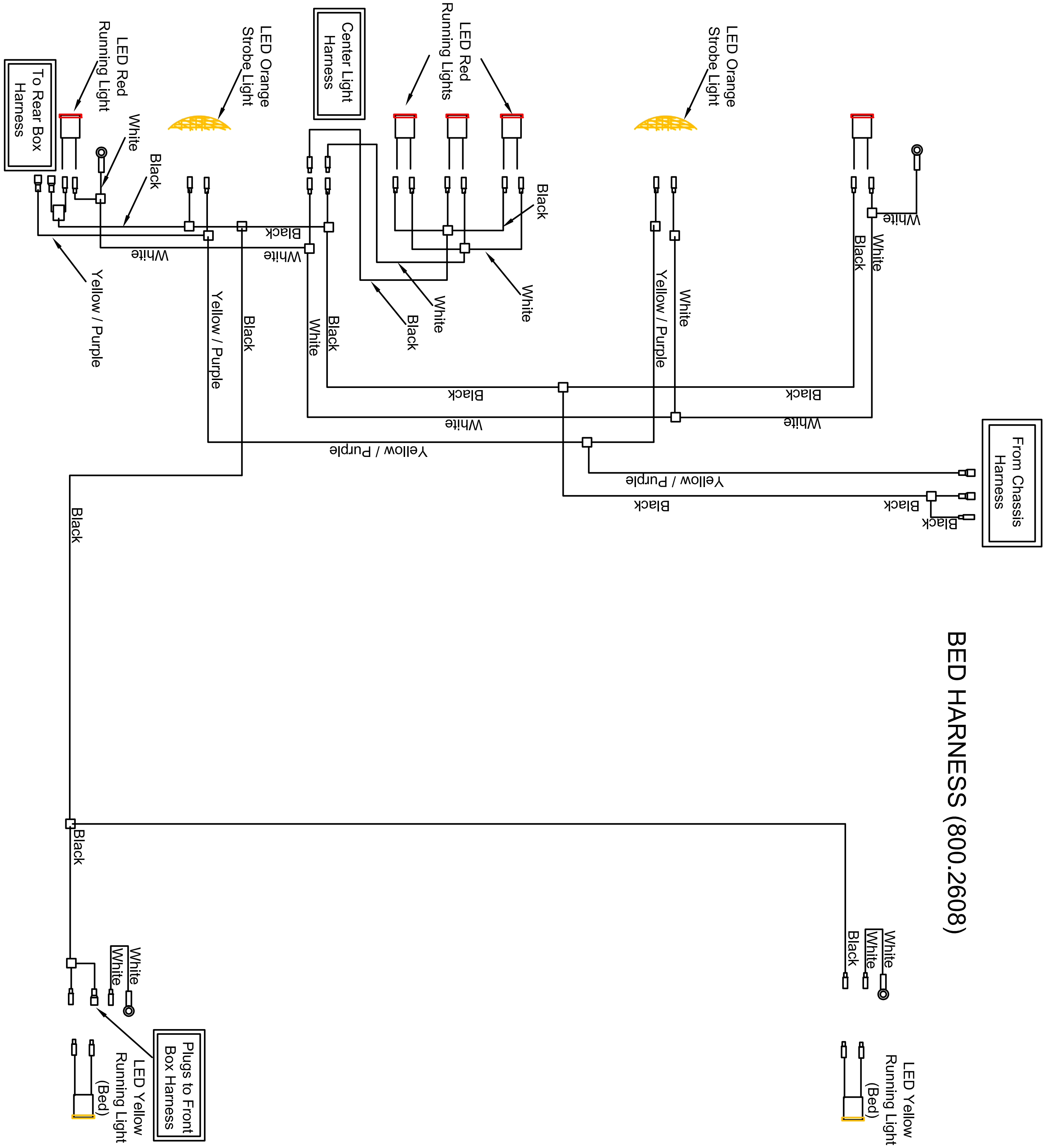
5.9 Trailer Bed Wiring Harness Diagram



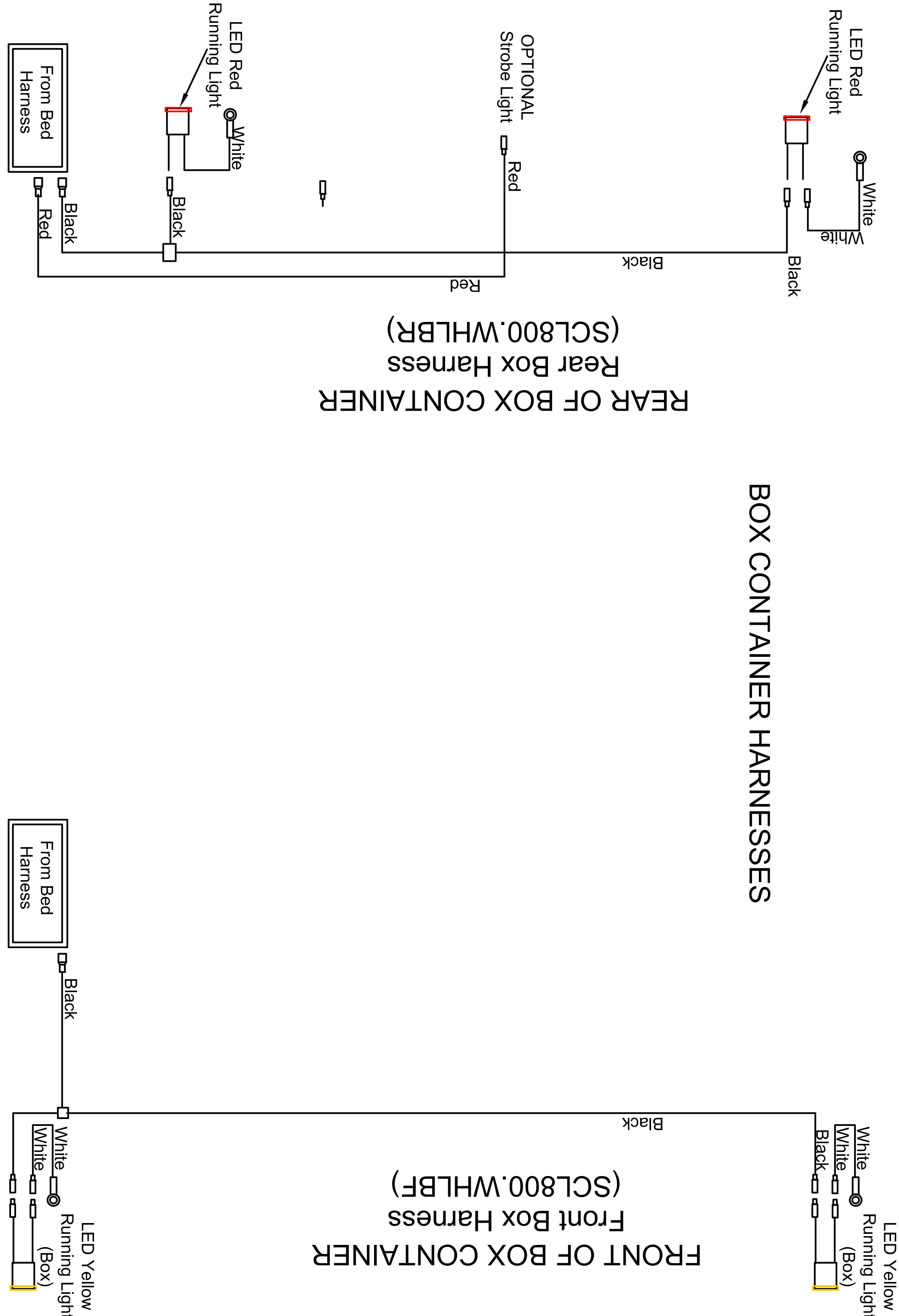
5.10 Brake Wiring Harness Diagram



5.11 Bed Wiring Harness Diagram

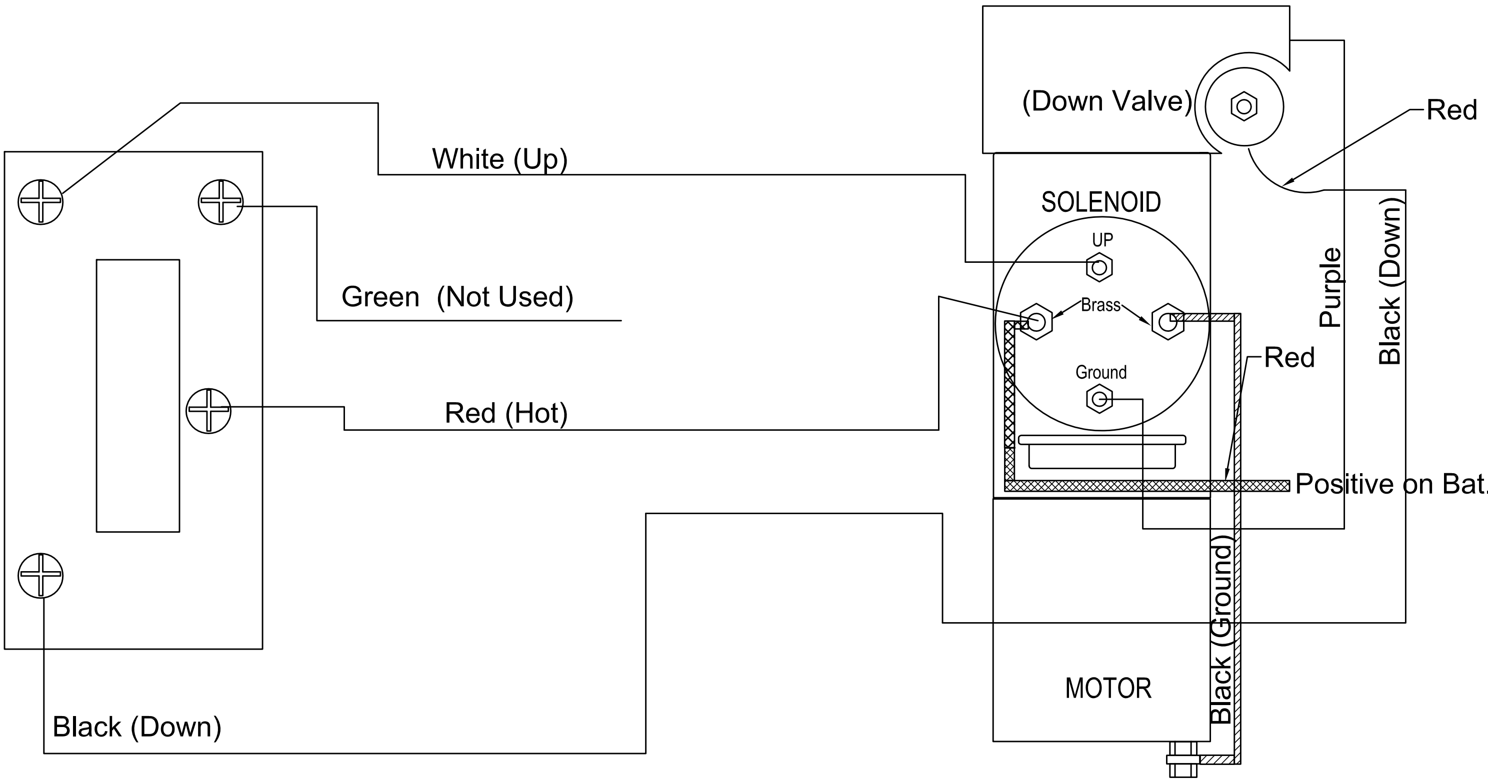


5.12 Box Wiring Harness Diagram



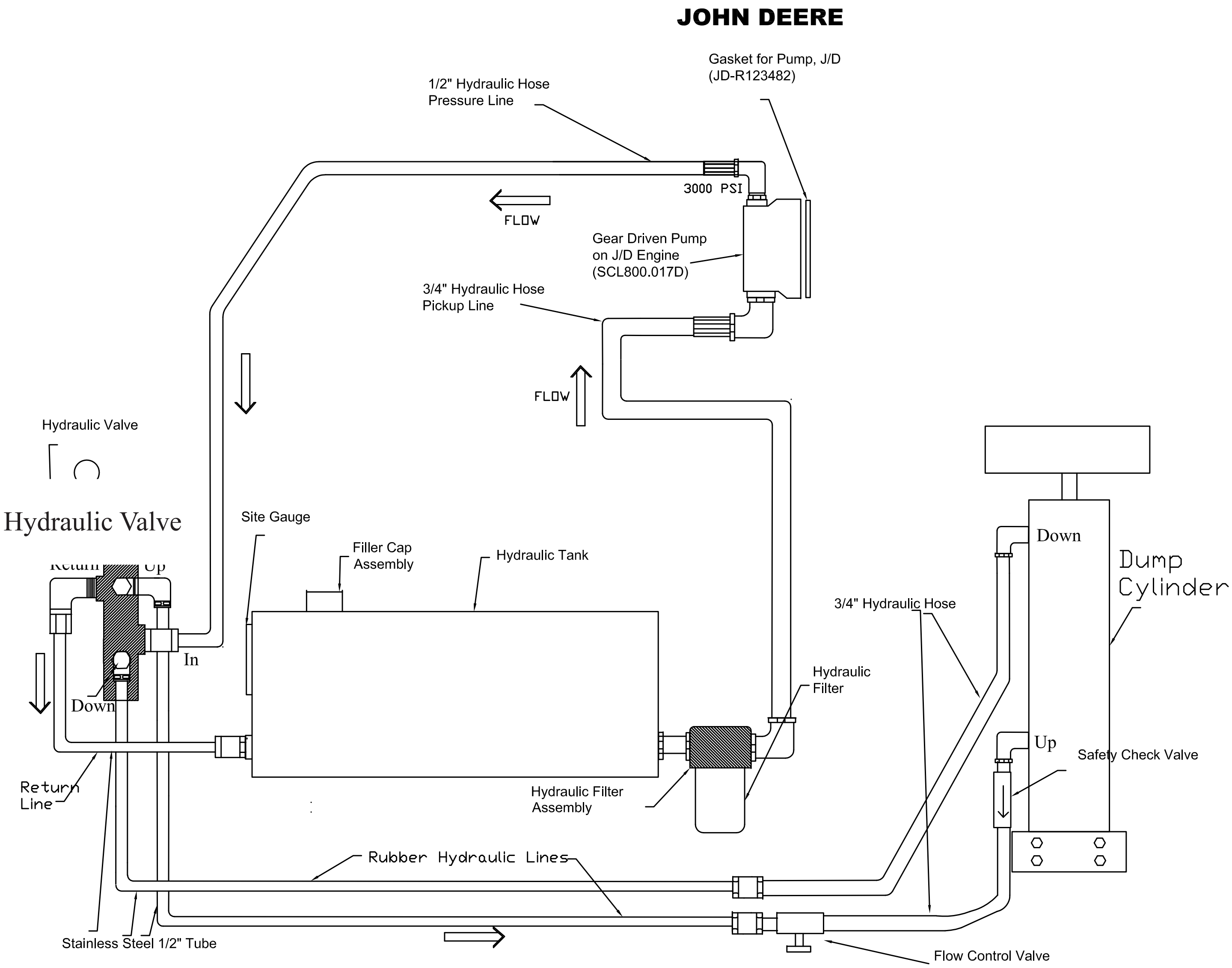
5.13 Boom Wiring Diagram

Yellow SPX 2012 and after



COLOR	FUNCTION
Black	Down
White	Up
Purple	Ground on Solenoid
Red (4 gauge cable)	Positive to Battery
Black (4 gauge cable)	Ground from Solenoid to Hydraulic Motor

5.14 Hoist Hydraulic System Diagram



5.15 Hoist Instructions

OPERATION OF DUMP HOIST

RAISING THE DUMP BODY

1. Make sure the leaf vacuum is connected properly to the towing vehicle. DO NOT RAISE THE HOIST IF THE UNIT IS NOT PROPERLY CONNECTED TO THE TOW VEHICLE!
2. Survey the dumping area for overhead lines or any object that could hinder the path of the box container when dumping. Be sure to look at the sides, rear of unit and above the box container for any obstructions, persons or animals.
3. Secure the rear doors to the side of the box container.
4. Double-check the complete area to be sure all people, power lines or other objects are clear of the dumping area.
5. Start the engine using the procedure located in the front of this manual. Set the engine speed to approximately 1,200 RPM's (increase if necessary).
6. Make sure the clutch is disengaged.
7. Slowly raise the body to the height needed to remove the material from the box container.
8. Use the body prop if the unloaded box container is left in the raised position.

CAUTION See Crysteel Truck Body Prop section for complete instructions.

LOWERING THE DUMP BODY

1. Make sure the leaf vacuum is connected properly to the towing vehicle. DO NOT RAISE THE HOIST IF THE UNIT IS NOT PROPERLY CONNECTED TO THE TOW VEHICLE!
2. Make sure all persons, tools or other objects are clear of the hoist .
3. Make sure body prop is down.
4. Set engine speed to appoximately 1,200 RPM's and slowly lower hoist.
5. When the dump body lowers to approximately 12" from the bottom position the body may stop. This is because a safety check valve is installed in the hoist hydraulic lines. The check valve prevents the dump body from being lowered too quickly. DO NOT REMOVE OR ALTER THIS VALVE IN ANY WAY!
6. If the body stops near the bottom, raise the body approximately 12" and slowly lower the dump body to the bottom. The body must be lowered slowly the last 12" or it will not go to the bottom position.

.

5.15 Hoist Instructions, continued ...

OPERATION OF DUMP HOIST

SOME DO'S AND DONT'S FOR SAFETY AND LONG LIFE

1. Use the Proper hydraulic Fluid. KEEP IT CLEAN. Remember to change it regularly.
2. Lubricate all grease fittings at regular intervals.
3. ALWAYS BLOCK UP THE HOIST BEFORE WORKING UNDER IT.
4. Do not race the engine when unloading.
5. Do not overload the hoist beyond its capacity.
6. DO NOT TAMPER WITH THE HYDRAULIC RELIEF VALVE. This will void the warranty. It can cause severe damage to the hoist and cylinder.
7. NEVER LEAVE THE PTO IN GEAR WHILE TRANSPORTING, IT WILL RUIN THE HYDRAULIC PUMP.
8. Check all bolts and setscrews regularly.

HYDRAULIC FLUID

The hydraulic tank hold 8 gallons. KEEP IT CLEAN!! USE CLEAN CONTAINERS, FUNNELS AND OTHER EQUIPMENT. Use a high quality ISO 68 grade, non-foaming, hydraulic fluid.

CRYSTEEL TRUCK BODY PROP

Crysteel's Body Prop is designed and intended for use to support an EMPTY truck body in the raised position to permit service work to be performed safely beneath a raised body. DO NOT GO BENEATH THE CONTAINER BODY UNLESS THE BODY IS EMPTY AND THE BODY PROP IS IN THE PROPER POSITION!

CAUTION UNLOAD BODY BEFORE USING BODY PROP!

OPERATION OF BODY PROP

1. Raise body to full height and shut off all power.
2. Raise prop to upright position.
3. Lower body SLOWLY until body bracket contacts prop.
4. DO NOT POWER HOIST DOWN.

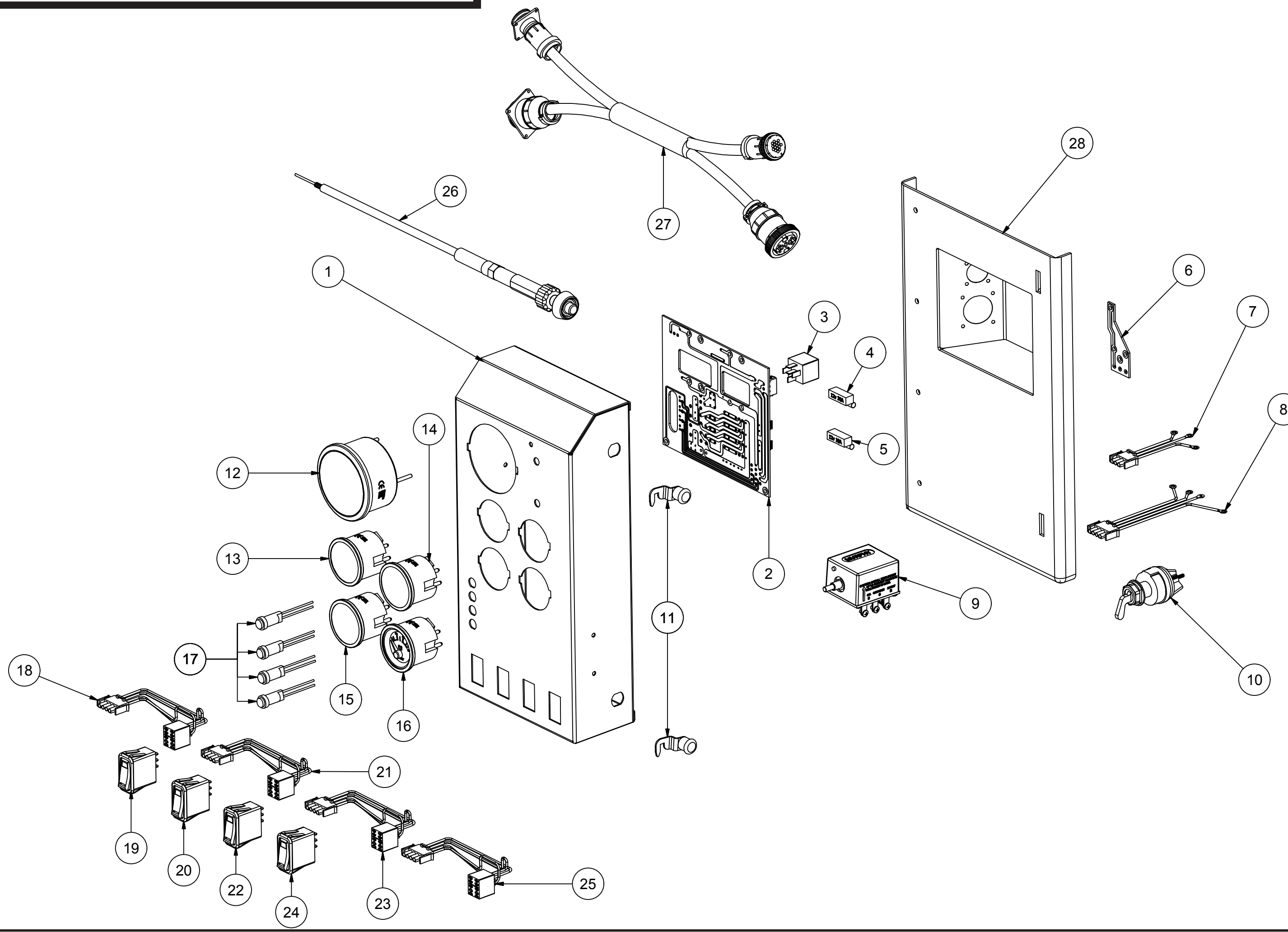
WARNING Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.

PARTS BREAKDOWNS SECTION

6.0 ENGINE GROUP

PARTS BREAKDOWNS SECTION
6.0 ENGINE GROUP

6.1 Instrument Panel Group

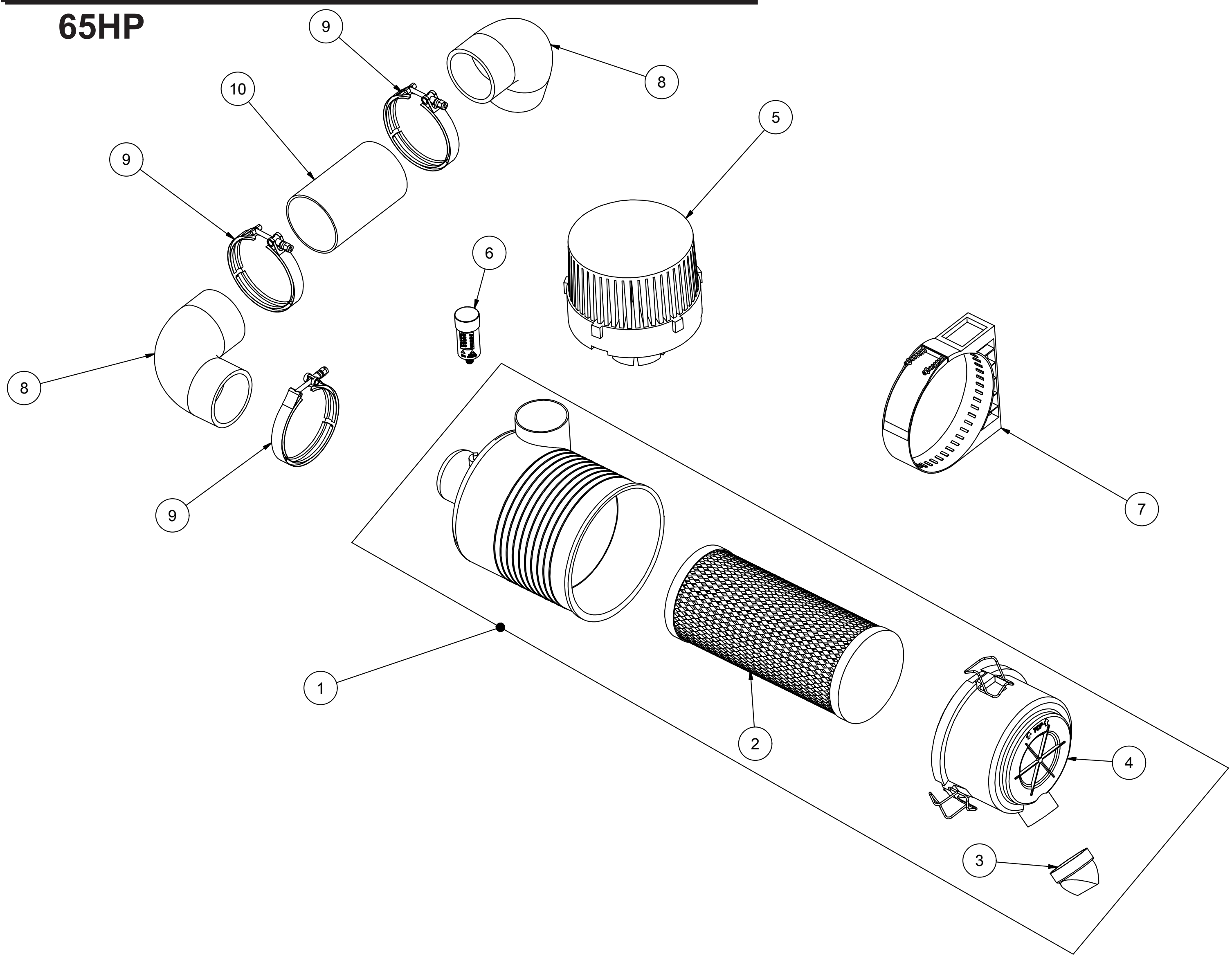


ITEM#	PART NO.	DESCRIPTION
*	STD.6300	Instrument Panel Complete
1	STD.6301	Inst. Panel Housing w/Latches
2	STD.2005	Circuit Board
3	VF4-15F11	Relay
4	30410.30	Circuit Breaker, 30 amp
5	100014.10	Circuit Breaker, 10 amp
6	STD.2006	Tachometer Circuit Board
7	400022	Murphy Switch Harn. Plug
8	400021	Ign. Switch Harness Plug
9	MO-P81505	Murphy Switch
10	31.253	Ignition Switch
11	STD.6308	Latch
12	63524	Tachometer
13	62540	Temperature Gauge
14	62542	Oil Pressure Gauge

ITEM#	PART NO.	DESCRIPTION
15	62551	Fuel Gauge
16	62555	Volt Meter
17	STD.1502B	LED Indicator Light
18	STD.2003	Switch Harness, Safety Light
19	4045.0021B1	Rocker Switch, Safety Light
20	4045.0021A1	Rocker Switch , Rem. Throttle
21	STD.2004	Switch Harness, Rem. Throttle
22	4045.0025A	Rocker Switch, Remote PTO
23	STD.2004	Switch Harness, Rem. PTO
24	3045.0028	Rocker Switch, Cold Start
25	STD.2002	Switch Harness, Cold Start
26	LCT623.001A	Throttle Carble
27	550.1841	Jumper Harness, Panel to Sheet Metal
28	550.1848	Instr. Panel Mounting Stand

6.2 Air Filter Group - Non Turbo Engines

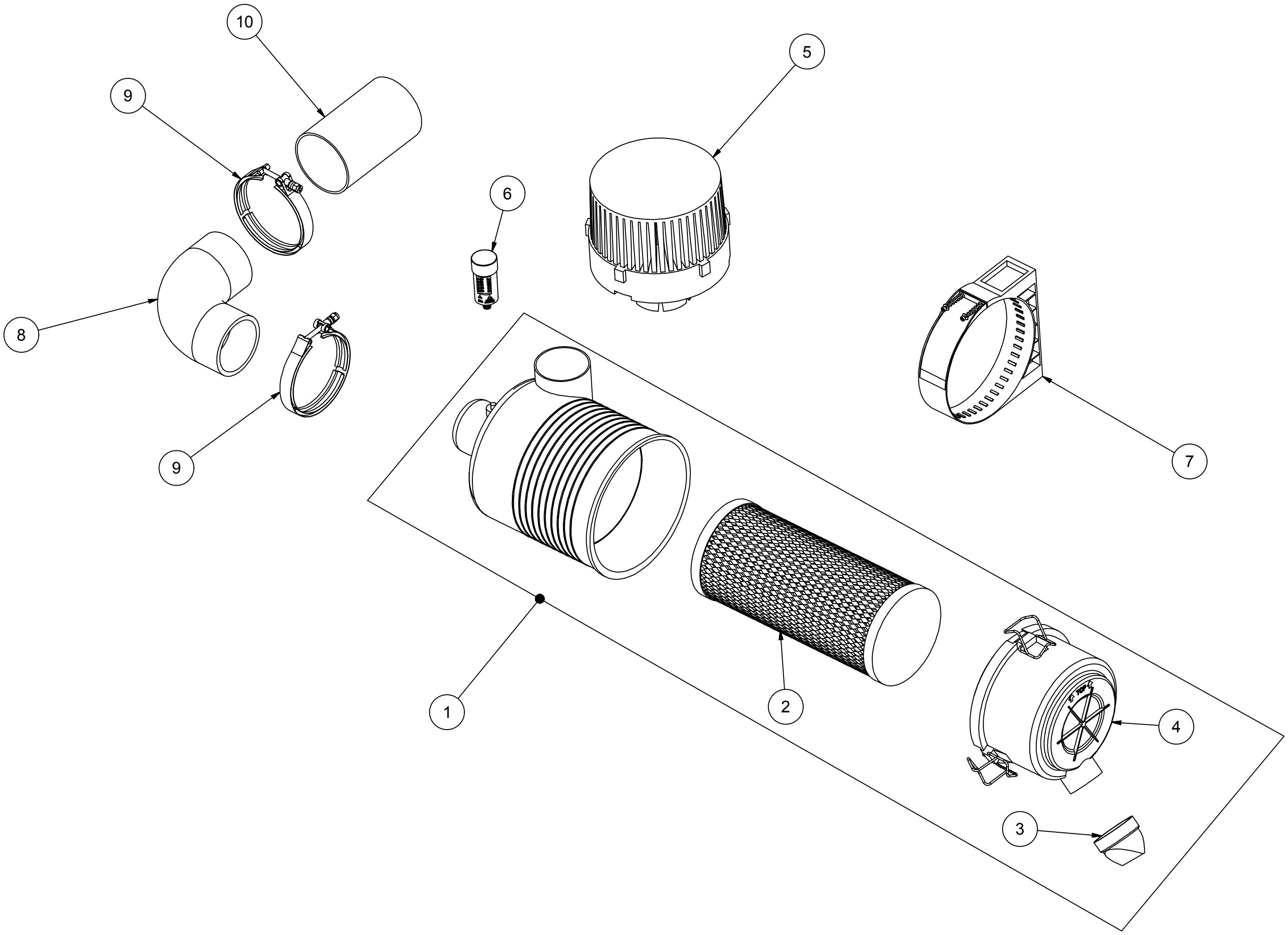
65HP



ITEM #	PART NUMBER	DESCRIPTION
1	OD-G070019	Air Cleaner Assembly w/filter (2 - 4)
2	UU-P827653	Filter Element
3	UU-P158914	Vacuator Valve
4	UU-P534048	Cover, does not include vacuator valve
5	UU-21.1330000	Pre-Cleaner, Turbo III
6	OD-X002102	Air Restriction Indicator
7	OD-P777731	Mounting Clamp
8	OD-P105532	90 Rubber Elbow
9	OD-HS.52	Clamp
10	Call	Straight Aluminum Pipe

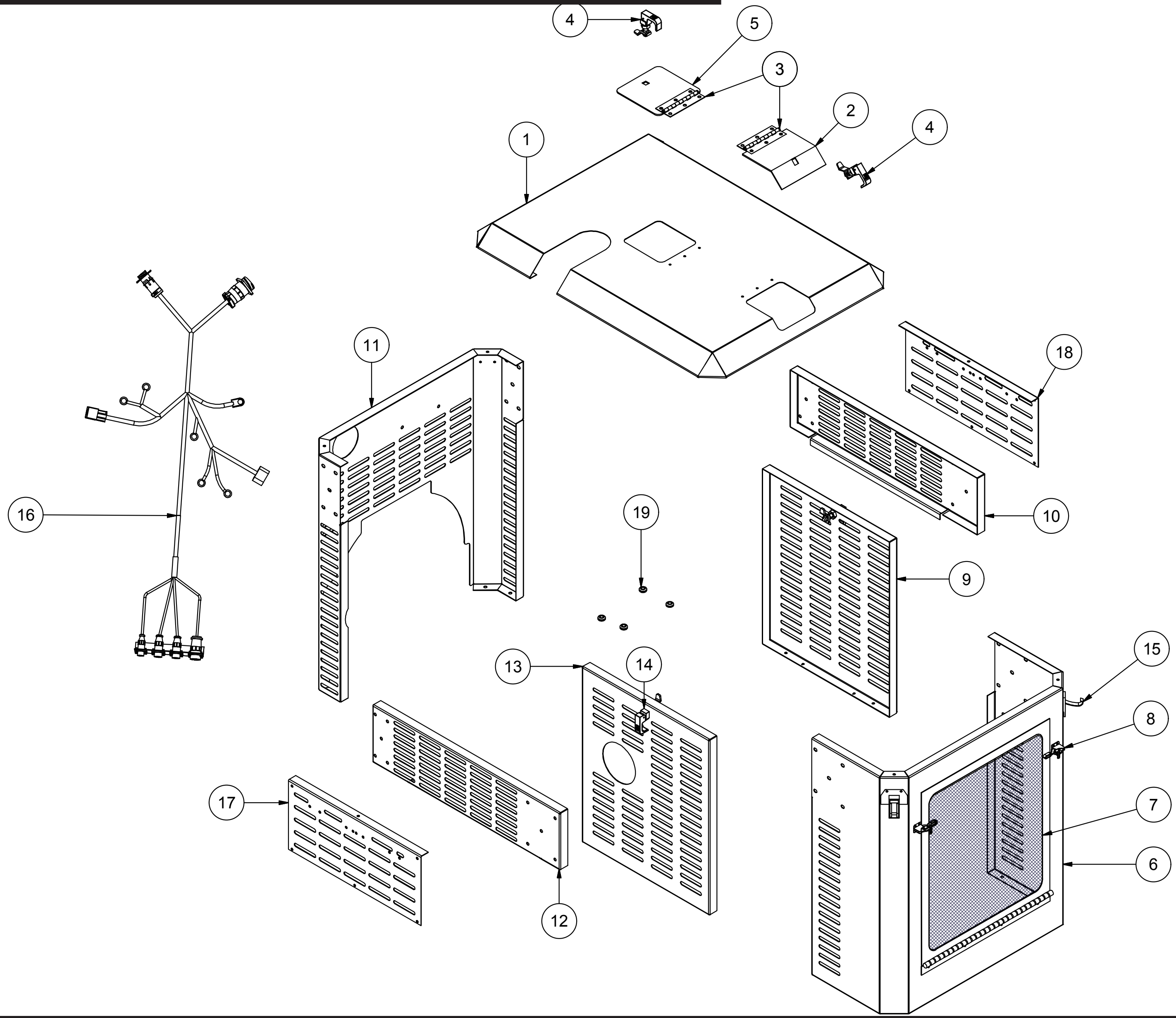
Parts Breakdown Section

6.3 Air Filter Group - Turbo Engines



ITEM #	PART NUMBER	DESCRIPTION
1	OD-G082527	Air Cleaner Assembly w/filter (2 - 4)
2	UU-P828889	Filter Element
3	UU-P158914	Vacuator Valve
4	UU-P534048	Cover, does not include vacuator valve
5	UU-21.1330001	Pre-Cleaner, Turbo III
6	OD-X002102	Air Restriction Indicator
7	OD-P777732	Mounting Clamp
8	OD-P105532	90 Degree Rubber Elbow
9	OD-HS.52	Clamp
10	call	Straight Aluminum Pipe

6.3 Sheet Metal Group - Cummins 2012 Tier4

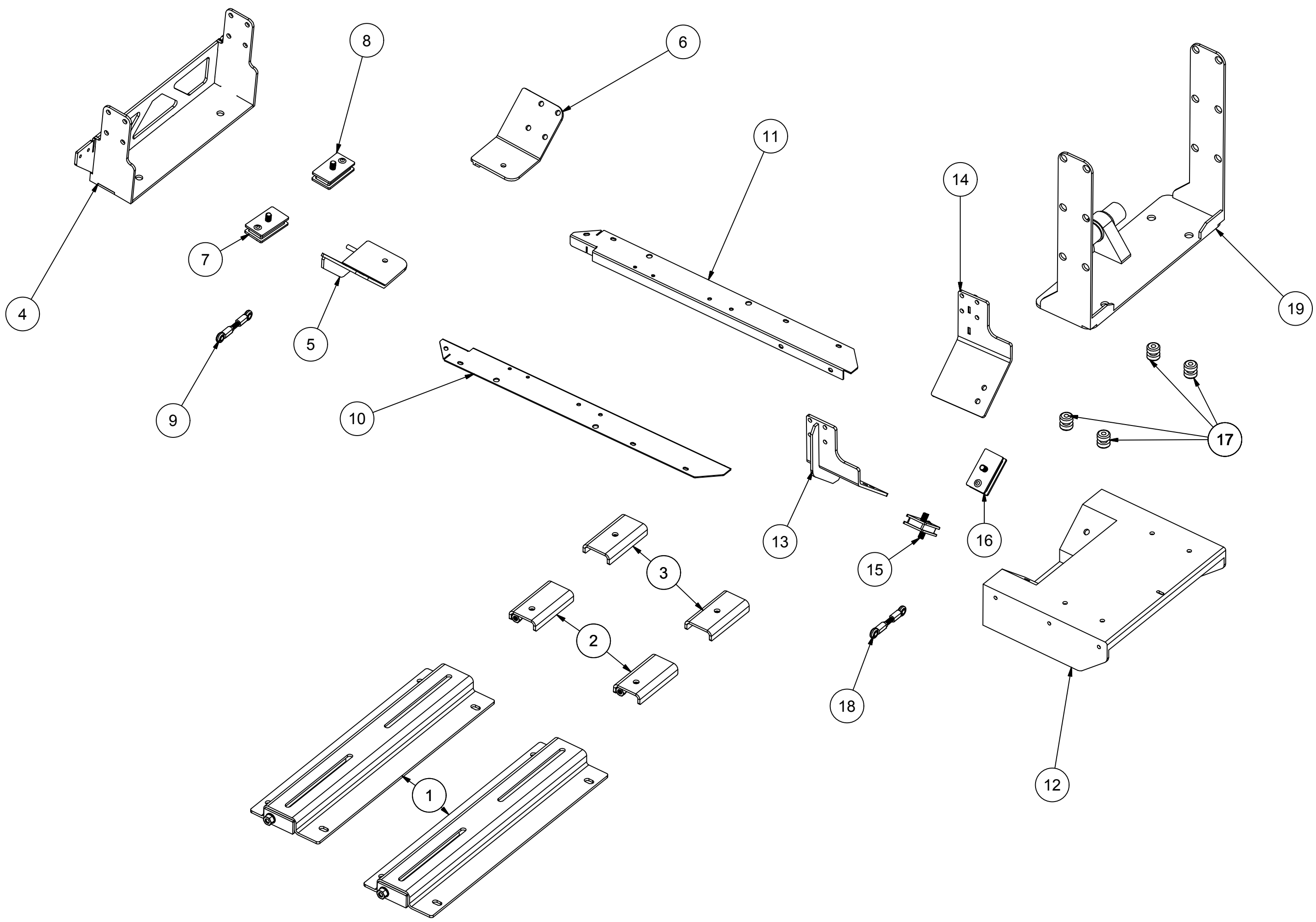


ITEM#	PART NO.	DESCRIPTION
1	B3.3.2121 B3.3.2122	Hood, 65HP Hood, 74HP turbo
2	4045.2102B	Radiator Access Door
3	4045.2102C	Radiator Access Door Hinge
4	LCT60.624A	Lift and Turn Latch
5	4045.2102B	Oil Fill Access Door
6	B3.3.2120	Front Panel
7	B3.3.2129	Radiator Screen
8	LCT650.114	Radiator Screen Clamp
9	B3.3.2109	Panel Door, LH
10	B3.3.2125	Upper Side Panel, LH

ITEM#	PART NO.	DESCRIPTION
11	B3.3.2127 B3.3.2128	Rear Panel, 65HP Rear Panel, 74HP turbo
12	4045.2105A	Upper Side Panel, RH
13	B3.3.2123	Panel Door, RH
14	LCT60.624	Lift and Turn Latch
15	LCT609.602	Overcenter Latch
16	B3.3.2001C	Wiring Harness, Tier 4
17	B3.3.2124	Top Side Filler Panel, RH
18	B3.3.2126	Top Side Filler Panel, LH
19	2856.26012	Door Grommet

Parts Breakdown Section

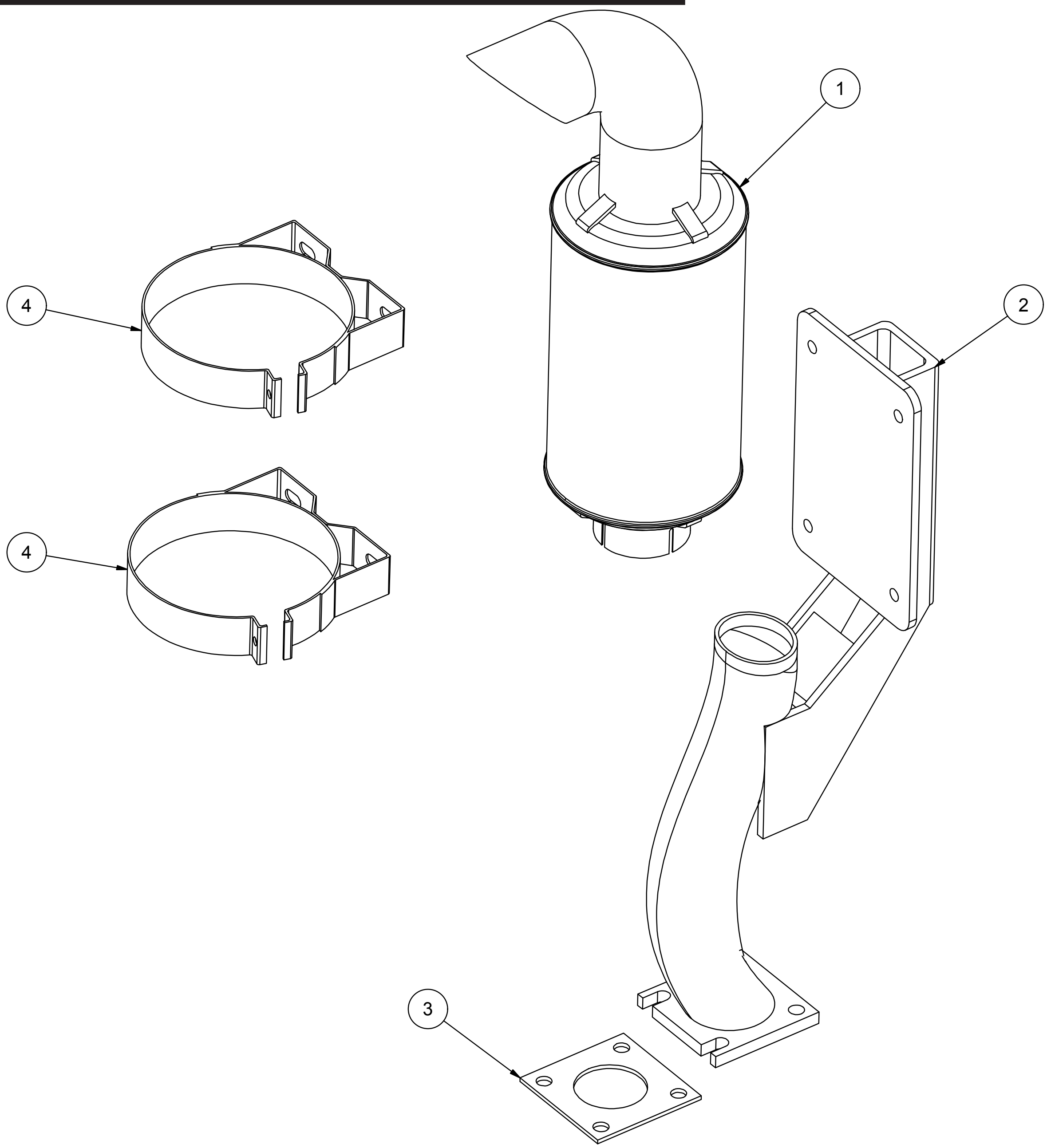
6-4 Engine Mount Group - Cummins



ITEM#	PART NO.	DESCRIPTION
1	450.1003	Adjustable Motor Mount
2	LCT604.603.1	Engine Adjuster Nut
3	LCT640.603.1A	Engine Adjuster Bracket
4	B3.3.3156	Rear Motor Mount
5	B3.3.3157	Rear Mount Plate, RH
6	B3.3.3158	Rear Mount Plate, LH
7	B3.3.3155	Rubber Motor Mount
8	B3.3.3155	Rubber Motor Mount
9	B3.3.3160R	Ball Joint Threaded Rod
10	B3.3.3162	Side Rail, RH

ITEM#	PART NO.	DESCRIPTION
11	B3.3.3163	Side Rail, LH
12	B3.3.3151	Front Motor Mount
13	B3.3.3153	Front Mount Plate, RH
14	B3.3.3154	Front Mount Plate, LH
15	B3.3.3155	Rubber Motor Mount
16	B3.3.3155	Rubber Motor Mount
17	B3.3.3161	Vibration Mount
18	B3.3.3160	Ball Joint Threaded Rod
19	B3.3.3152	Radiator Support, Big

6-5 Muffler Group - SCL65

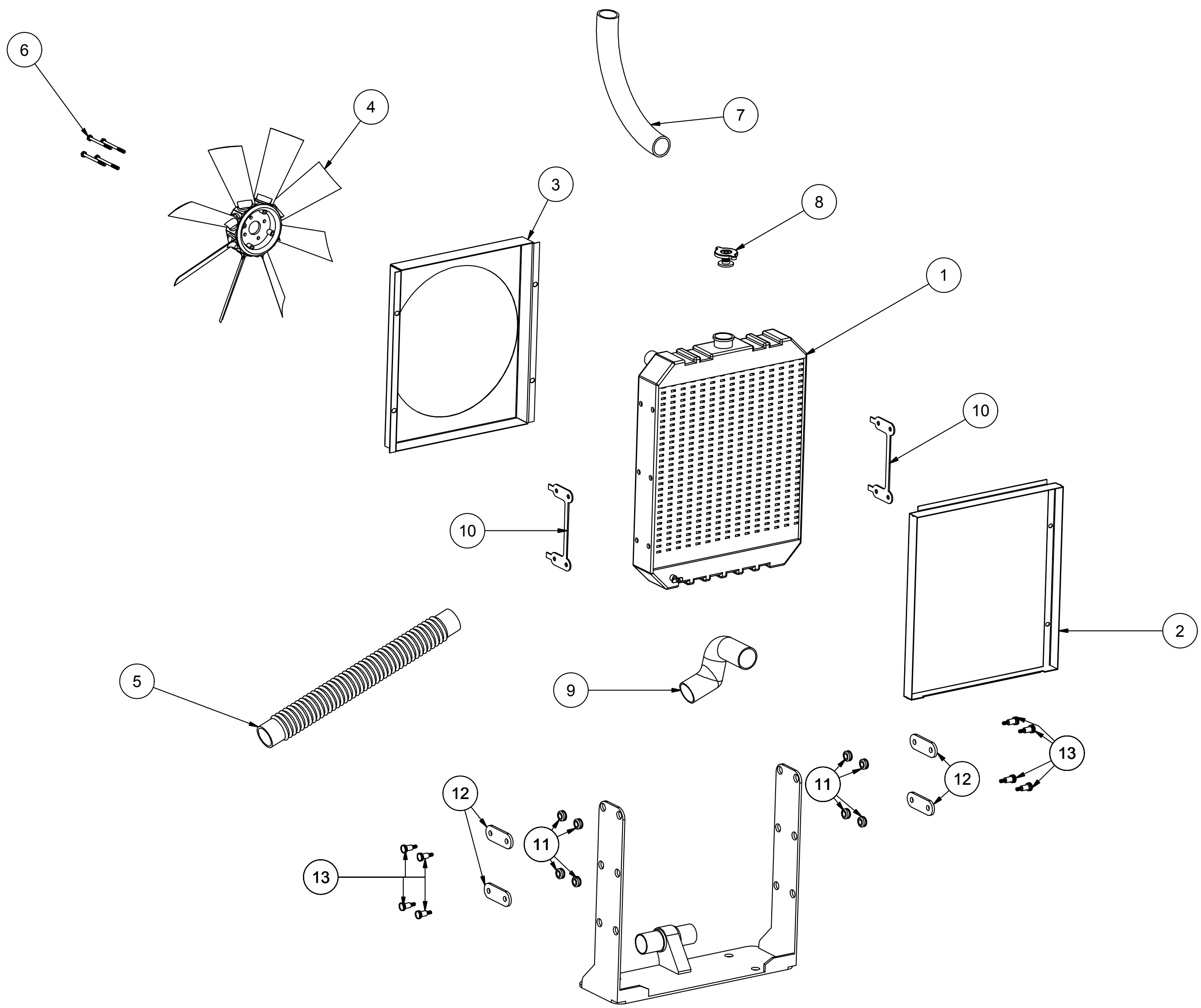


ITEM #	PART NUMBER	DESCRIPTION
1	49125A M080018.M	Muffler, Non Turbo Engines (65HP) Muffler, Turbo Engines (74HP)
2	550.1510	Exhaust Pipe (With Brace, Non-Turbo) Exhaust Pipe (Without brace, Turbo)
3	see engine manual	Gasket
4	550.1511	Band (Non-Turbo)

013113

Parts Breakdown Section

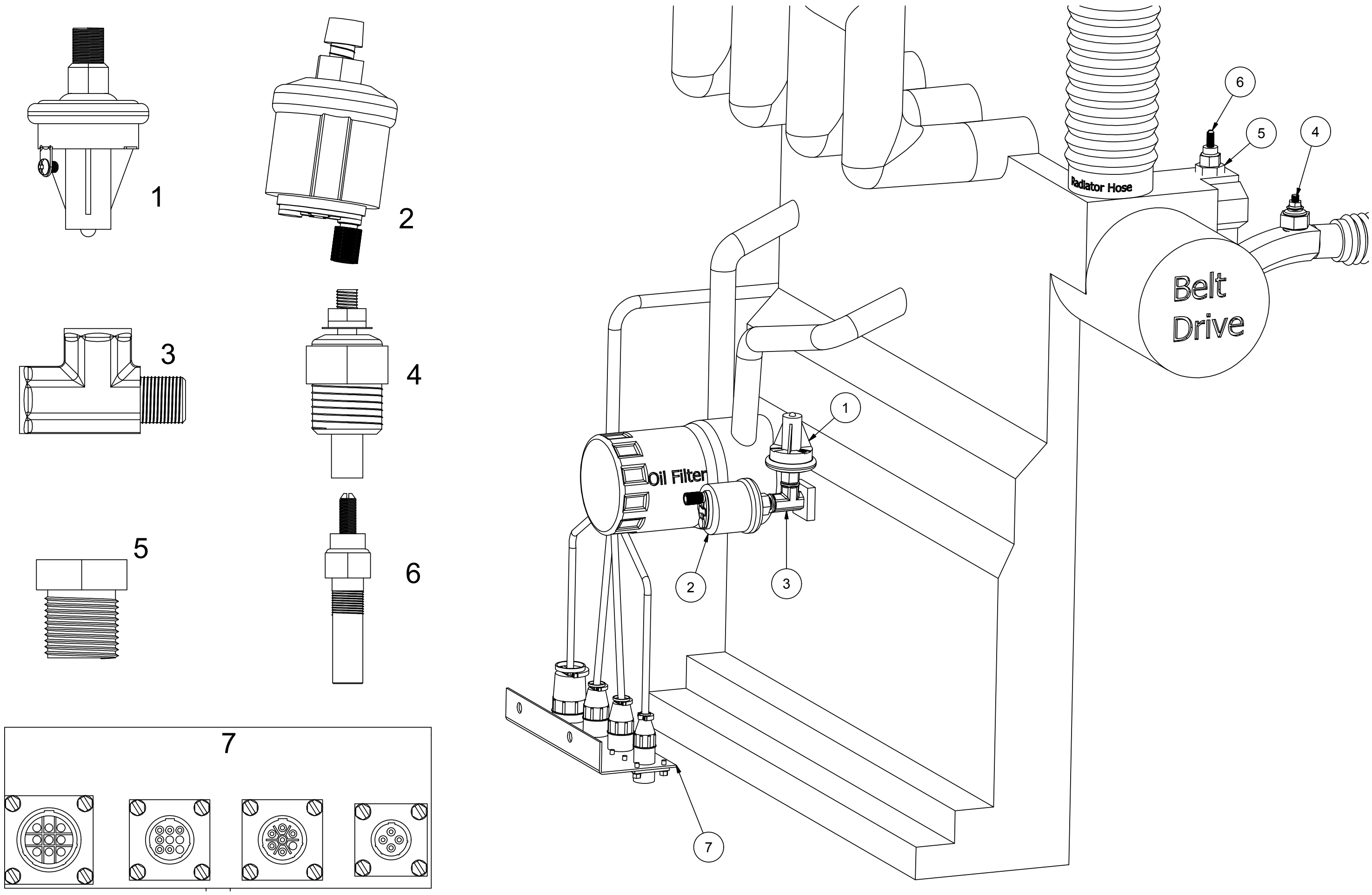
6.7 Radiator Group



ITEM#	PART NO.	DESCRIPTION
1	4045.9501A	Radiator, 4 cyl
2	4045.2190B	Front Fan Shroud
3	B3.3.2190C	Rear Fan Shroud
4	B3.3.9501B	Radiator Fan
5	B3.3.9505	Lower Radiator Hose
6	G8M8X090	Spacer Bolts, 4 required
7	B3.3.9504B	Upper Radiator Hose

ITEM#	PART NO.	DESCRIPTION
8	B3.3.9500M	Radiator Cap
9	B3.3.9505C	Lower Radiator Hose
10	B3.3.2151E	Radiator Shim
11	2561.26012	Radiator Grommet
12	B3.3.2151F	Radiator Bolt Bracket
13	ZSB.500.750	Shoulder Bolt

6.8 Engine Senders and Switches-Cummins



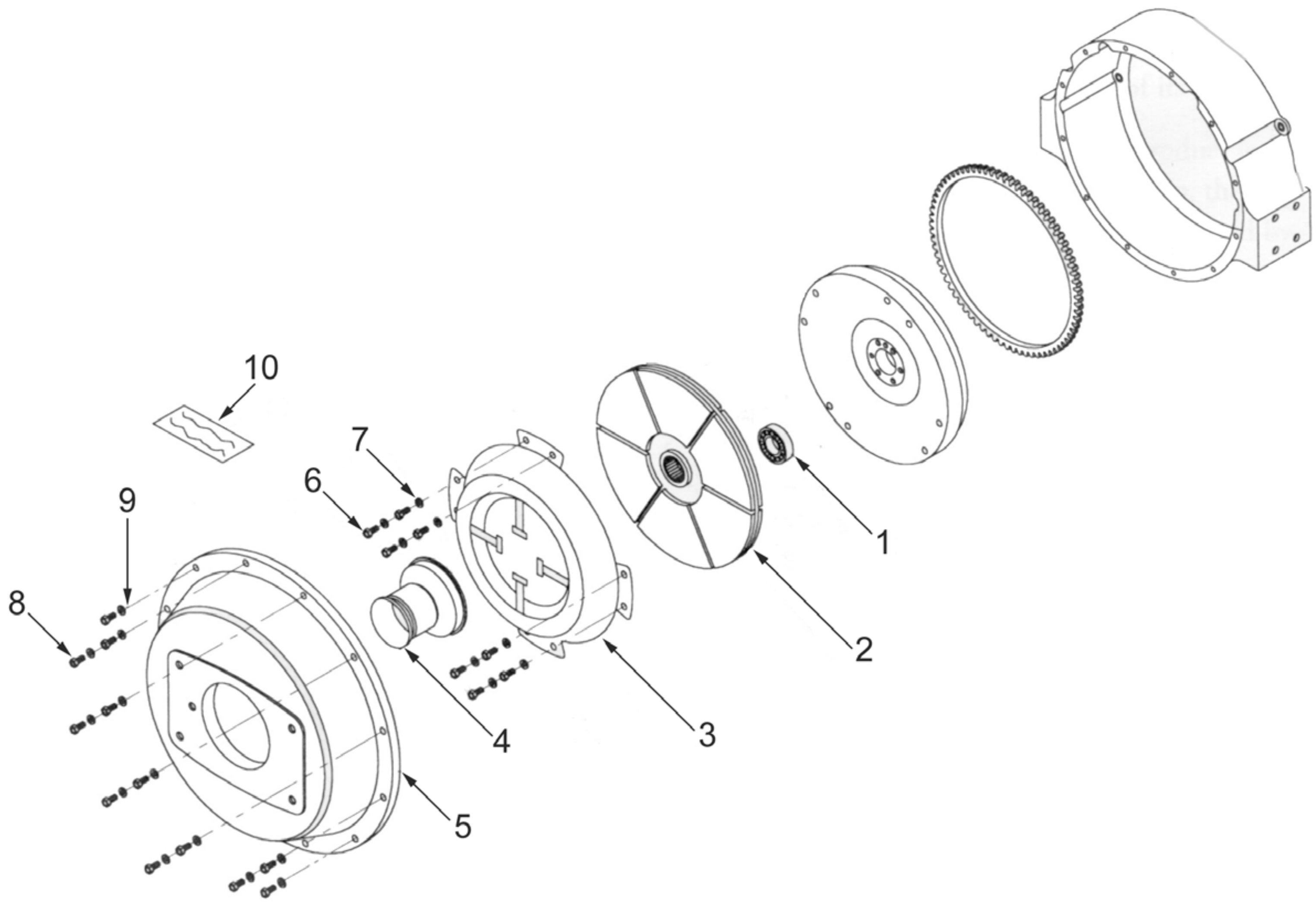
ITEM #	PART #	DESCRIPTION
1	9603273	Oil Pressure Switch
2	1500171	Oil Pressure Sender
3	HYF.1057I	T-Fitting
4	35423.049	Water Temperature Switch
5	HYF.1094	Switch Bushing Reducer

ITEM #	PART #	DESCRIPTION
6	HYF.1049	Sender Bushing Reducer
7	52320.009	Water Temp. Sender
8	B3.3.2001C	Engine Wiring Harness, Tier 4

7.0 CLUTCH GROUP

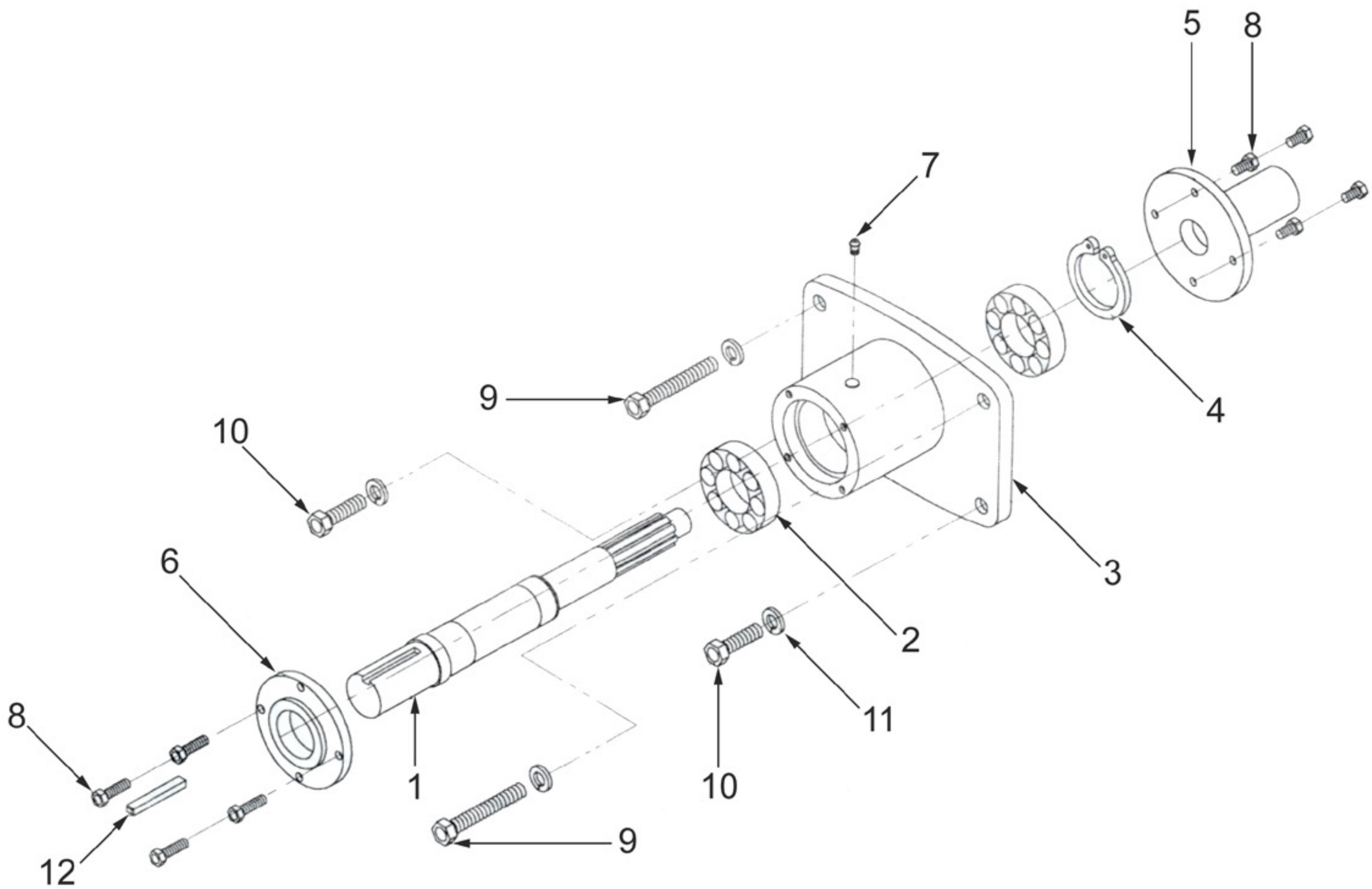
7.0 CLUTCH GROUP

7.1 Auto Clutch Group



ITEM #	PART NUMBER	DESCRIPTION
*	OD-48080023	Complete PTO/Clutch Assembly
1	OD-6205	Pilot Bearing
2	OD-41500149	Clutch Disk
3	OD-LC1919	Pressure Plate
4	OD-41500003	Throw Out Bearing
5	OD-41500006	Clutch Cover
6	OD-45000054	Bolt, 3/8-16 x 3/4"
7	OD-45000063	Lock Washer, 3/8"
8	OD-45000043	Bolt, M10-150 x 30MM
9	OD-45000046	Lock Washer
10	OD-41500009	Decal, Diesel Clutch

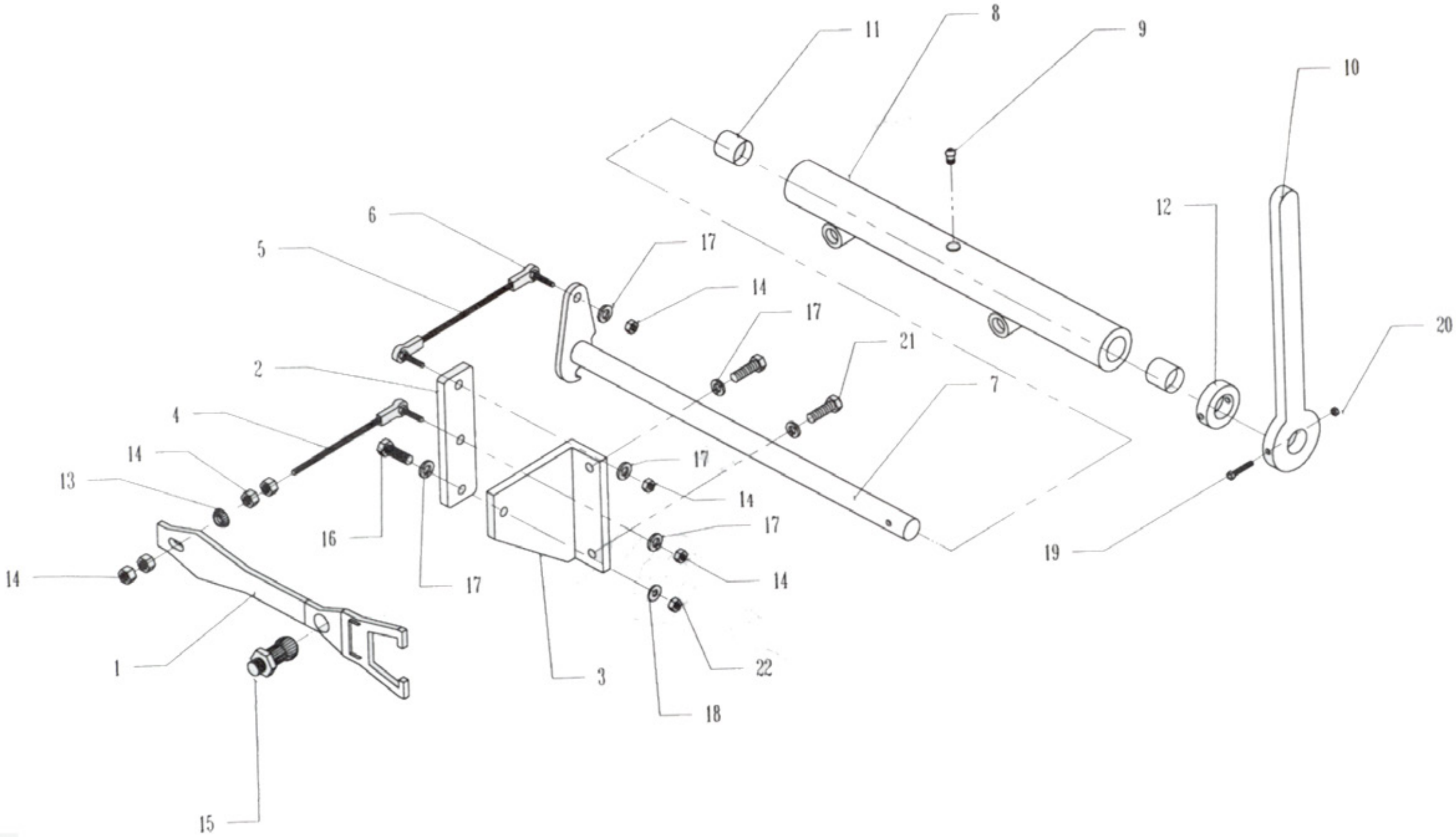
7.2 Auto PTO Group



ITEM #	PART NUMBER	DESCRIPTION
1	OD-41500138	PTO Shaft
2	OD-41500125	PTO Bearing
3	OD-41500055	PTO Housing
4	OD-41500056	Snap Ring, 1-11/16"
5	OD-41500000	PTO Collar
6	OD-41500123	Bearing Retaining Cover
7	OD-41500058	Grease Zerk
8	OD-45000029	Bolt, 5/16-18 x 3/4"
9	OD-45000105	Bolt, 9/16-12 x 3"
10	OD-45000104	Bolt, 9/16-12 x 1-1/2"
11	OD-45000103	Lock Washer
12	OD-LCT650.601K	Key, Stepdown - direct drive units only
12	OD-LCT650.601F	Key, Belt drive units only

Parts Breakdown Section

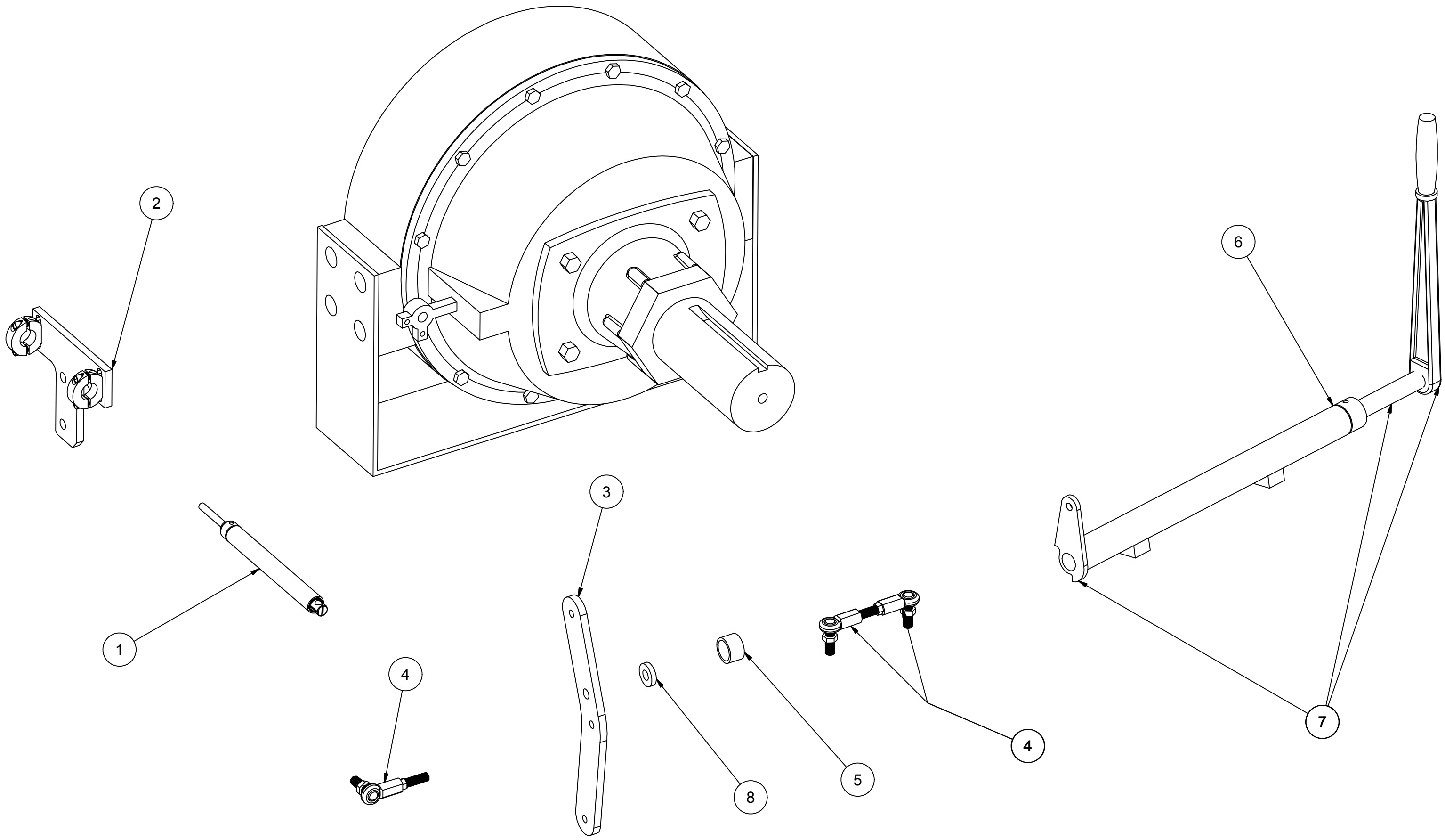
7.3 Auto PTO Linkage



ITEM#	PART NO.	DESCRIPTION
1	41500063	Fork
2	41500089	Linkage Bracket
3	41500166	Linkage Bracket
4	41500065	Linkage Rod
5	41500066	Linkage Rod
6	41500019	Linkage Rod End
7	41500041A.HD	Shaft, Lever
8	41500002	Shaft Housing
9	41500043	Grease Zerk
10	41500044	Clutch Handle
11	41500045	Shaft Bushing
12	41500046	Shaft Collar
13	41500030	Rocker Ball

ITEM#	PART NO.	DESCRIPTION
14	45000050	Nut, 3/89-16
15	41500001	Pivot Ball
16	15000177	Bolt, 3/8-16 x 1-3/4"
17	45000063	Lock Washer, 3/8"
18	45000064	Flat Washer, 3/8"
19	45000012	Bolt, 1/4 - 28
20	45000015	Locknut, 1/4-28
21	45000055	Bolt, 3/8-16 x 1-1/4"
22	45000051	Locknut, 3/8-16
23	41500002	Assembly, PTO Lever

7.4 Clutch Assist Group - Cummins(optional)



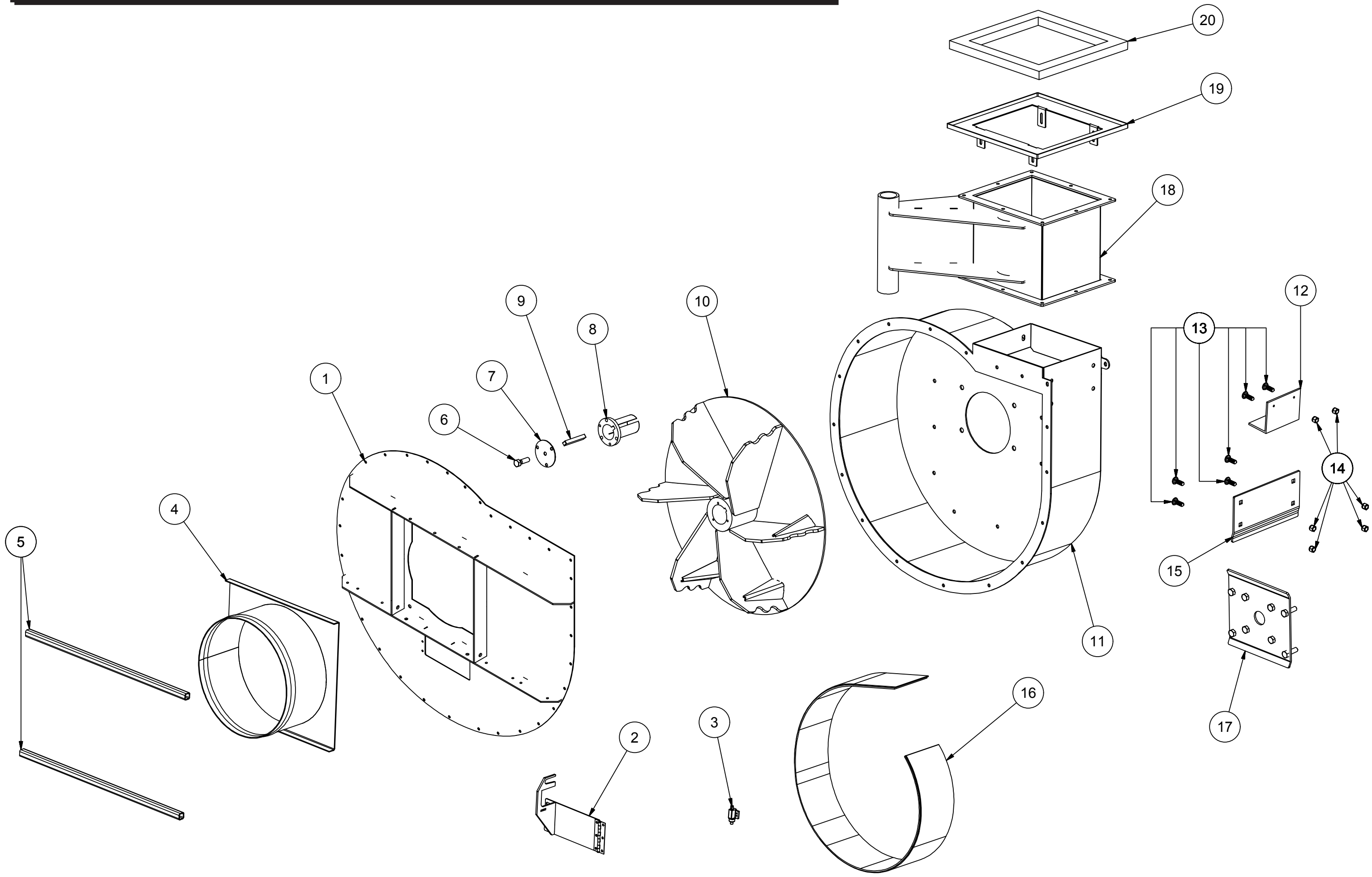
ITEM #	PART NUMBER	DESCRIPTION
1	400050.A	Clutch Cylinder
2	B3.3.3164	Cylinder Support Bracket, JD
3	B3.3.3165	Clutch Bracket Arm
4	41500019	Linkage, Rod end
	41500019A	Linkage, Threaded insert
5	400050.C1	Bearing
6	41500102	Pivot Shaft tube, Auto HD
7	4150041A.HD	Pivot Shaft

8.0 BLOWER HOUSING GROUP

8.0 BLOWER HOUSING GROUP

Parts Breakdown Section

8.1 Blower Housing Group



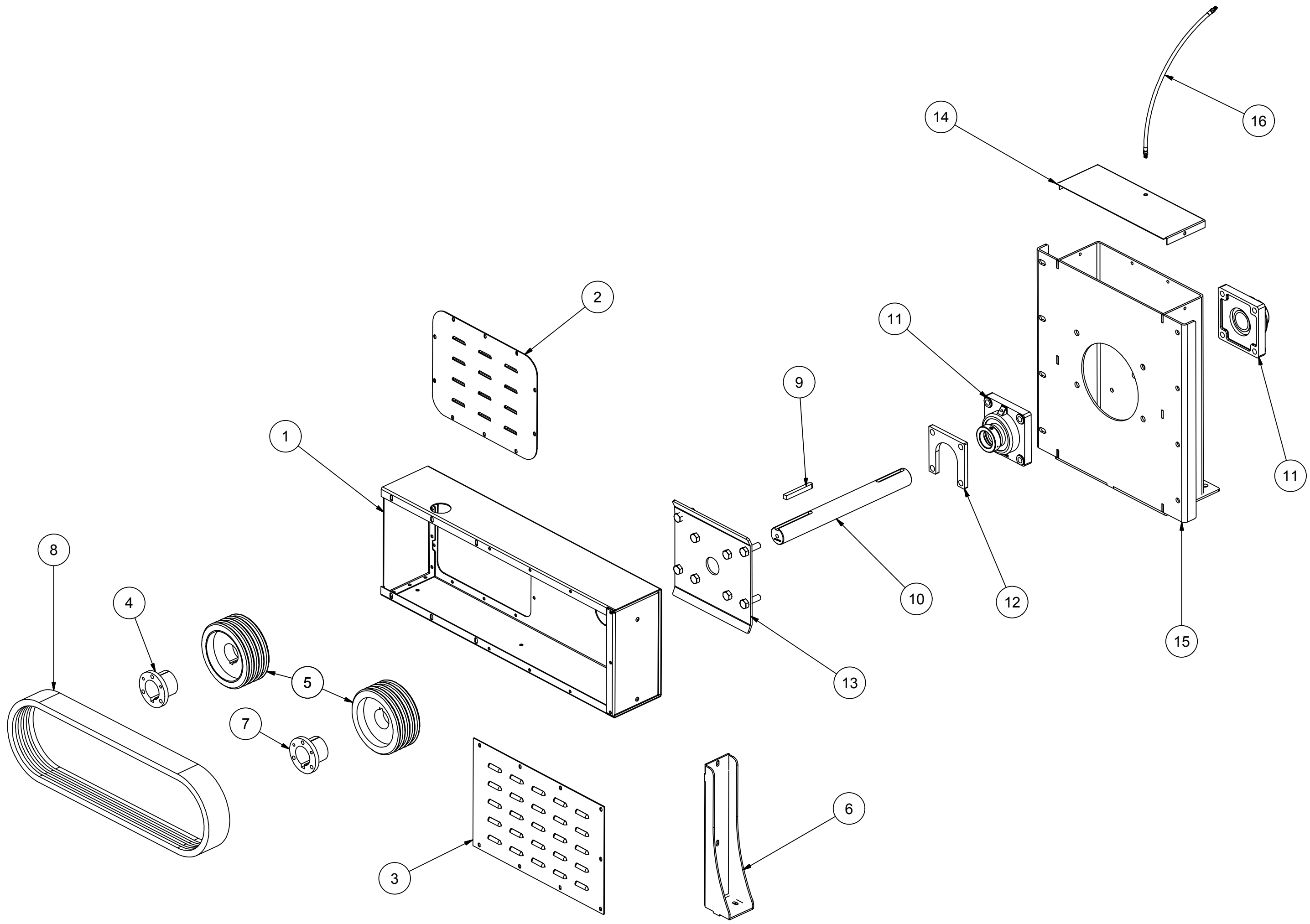
ITEM#	PART NO.	DESCRIPTION
1	450.1002G	Blower Housing Face
2	LCT621.603	Inspection Door
3	LCT690.601.A	Limit Switch
4	LCT616.604	Intake Flange
5	LCT600.635.1	Intake Flange Lock Rod
6	5CZ.500.750	Bolt
7	450.1004H	Dust Cover
8	450.1005	Bushing
9	450.1005B	Key
10	450.1004	Impeller
11	450.1002	Blower Housing Back
12	450.1002D	Curved Liner, Small
13	LCT620.603	Liner Bolt
14	LCT620.603N	Liner Nut

ITEM#	PART NO.	DESCRIPTION
15	450.1002E	Straight Liner, Small
16	450.1002L	Liner
17*	450.1408A	Bearing Plate
18	550.1006	Exhaust Duct
19	550.1007	Exhaust Duct Adjuster Plate
20	550.1007G	Exhaust Duct Gasket
21 21a	STD.4000.A STD.4000	Limit Switch Box Assembly Limit Switch Box
22	STD.4001	Limit Switch Actuator

*As of Feb 1, 2015

Parts Breakdown Section

8.2 Belt Drive Group



ITEM#	PART NO.	DESCRIPTION
1	450.1400	Belt Guard Back
2	450.1400D	Louver, small
3	450.1400E	Louver, large
4	450.1403	Bushing, impeller side
5	450.1402	Pulley
6	450.1400F	Bracket
7	450.1404	Bushing, engine side
8	450.1401	Power Band

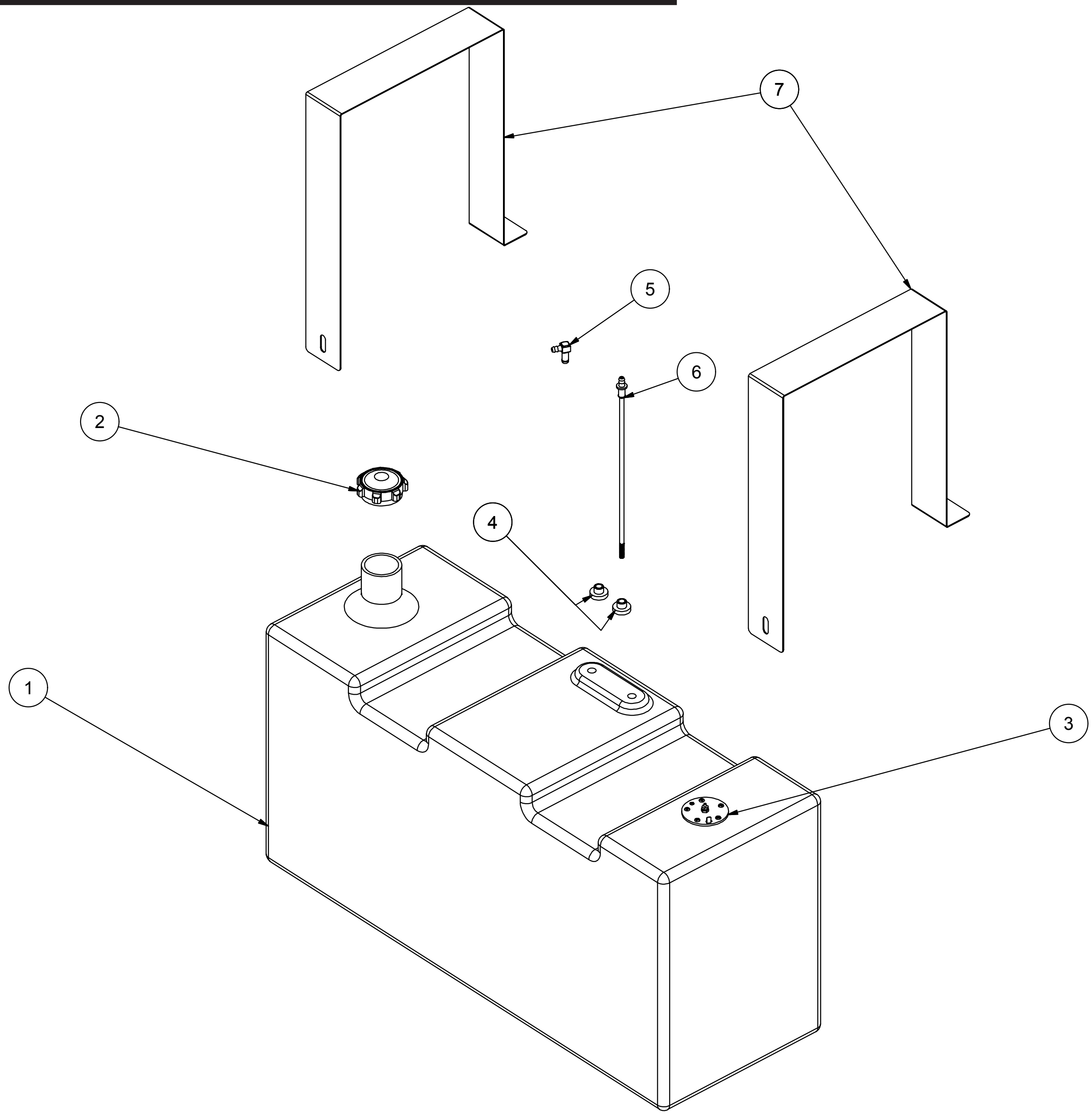
ITEM#	PART NO.	DESCRIPTION
9	450.1403B	Key
10	450.1405	Shaft
11*	450.1406A	Bearing
12	450.1408B	Spacer
13*	450.1408A	Bearing Plate
14	450.1409B	Lid
15	450.1407	Pedestal
16	450.1410	Grease Hose

*As of Feb 1, 2015

9.0 CHASSIS AND HOPPER GROUP

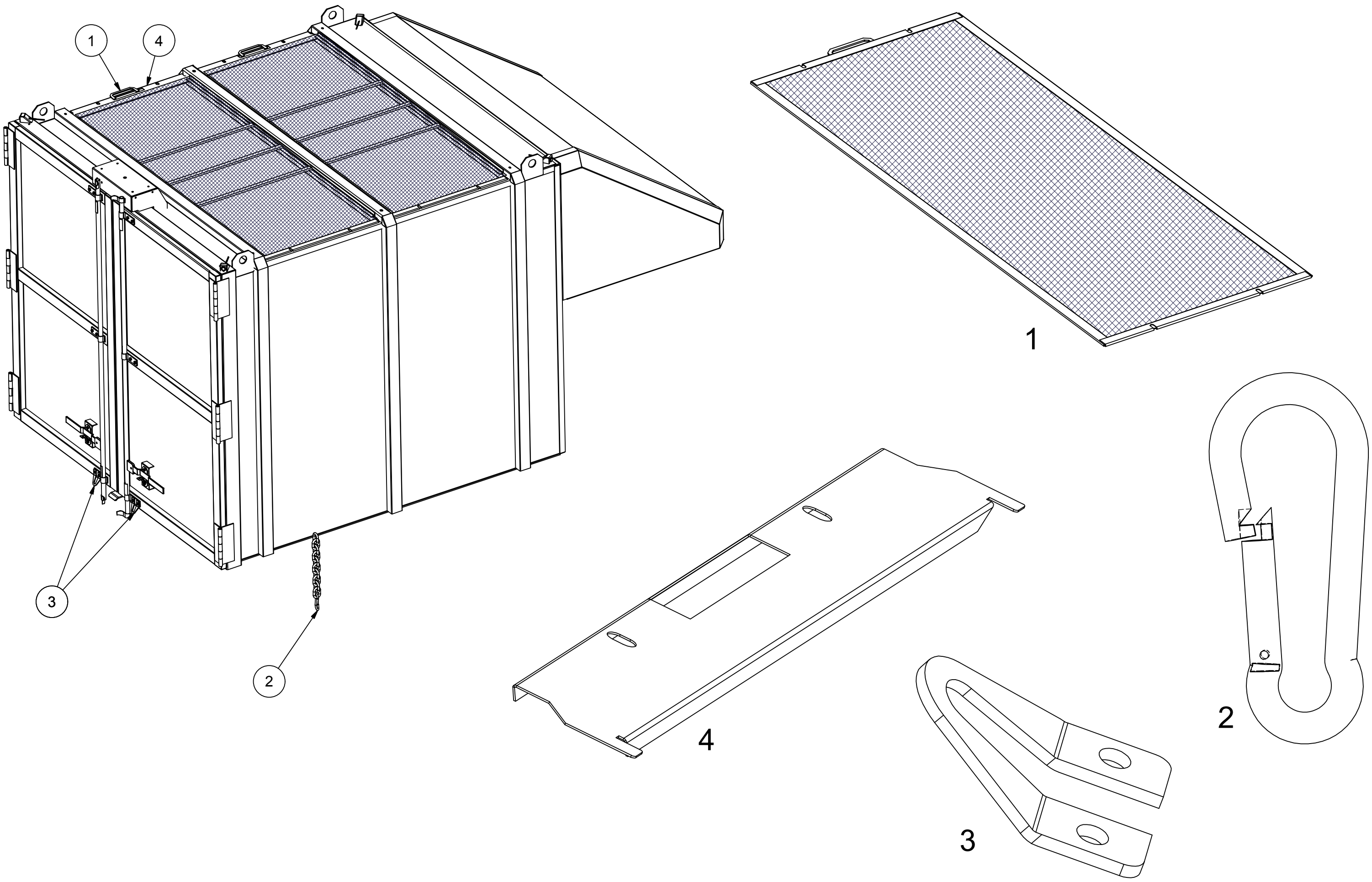
9.0 CHASSIS AND HOPPER GROUP

9.1 Fuel Tank Group



ITEM#	PART NO.	DESCRIPTION
1	450.1101A	Fuel Tank
2	450.1102A	Fuel Cap
3	450.1103P	Fuel Sender
4	MET633.901M	Grommet
5	450.1103	Fuel Pick Up Fitting
6	800.2527	Fuel Pick Up Tube
7	450.1101D	Hold Down Strap

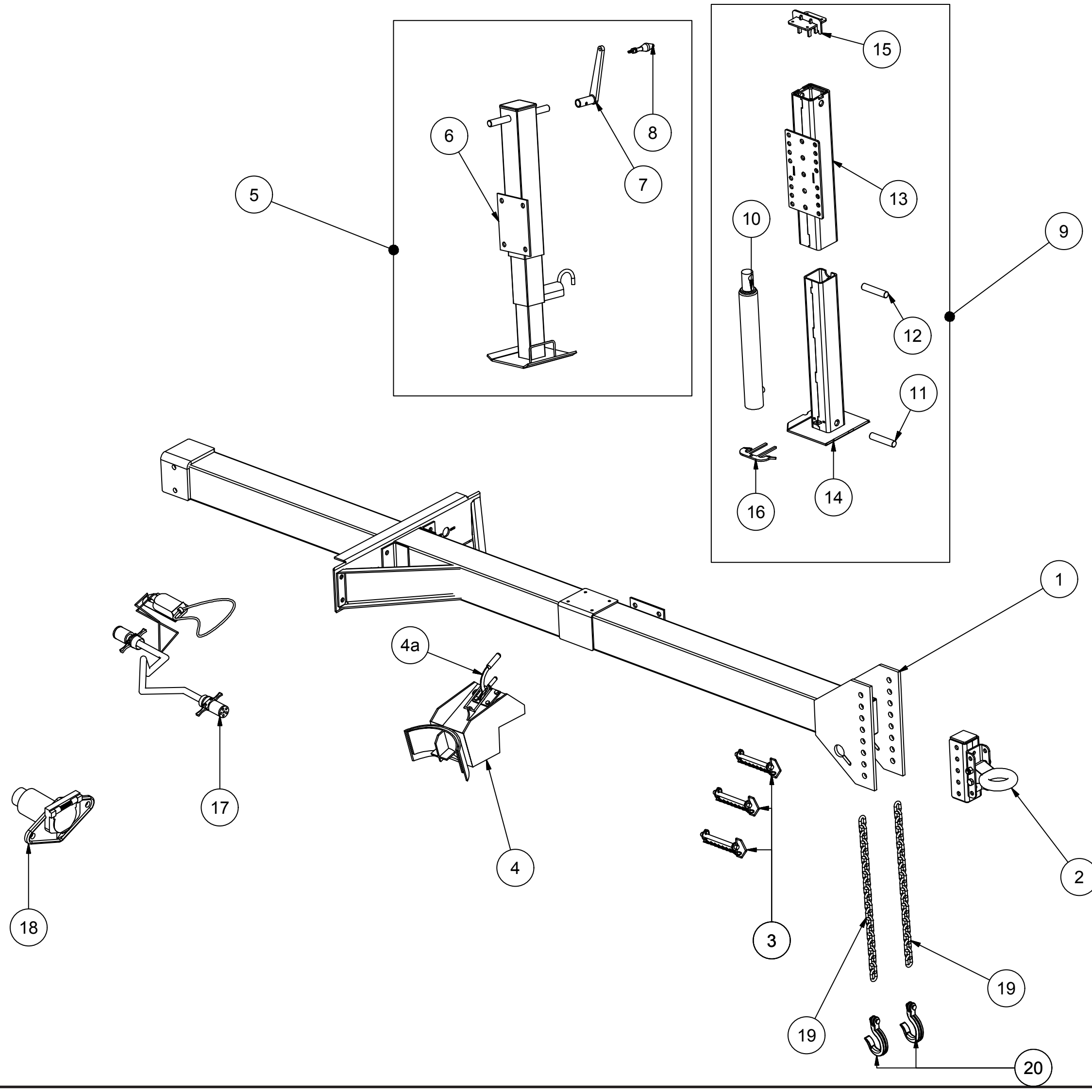
9.2 Box Container Screens



ITEM #	PART NUMBER	DESCRIPTION
1	SCL805.810	Screen, 2 required for 14/20 CY 3 required for 25/30 CY
	SCL805.810M	Replacement mesh screen, 36”W x 100’ roll
2	OD-200008	Spring Clip
3	OD-7502.99	Lock down bracket
4	OD-800.2807	Screen Retainer

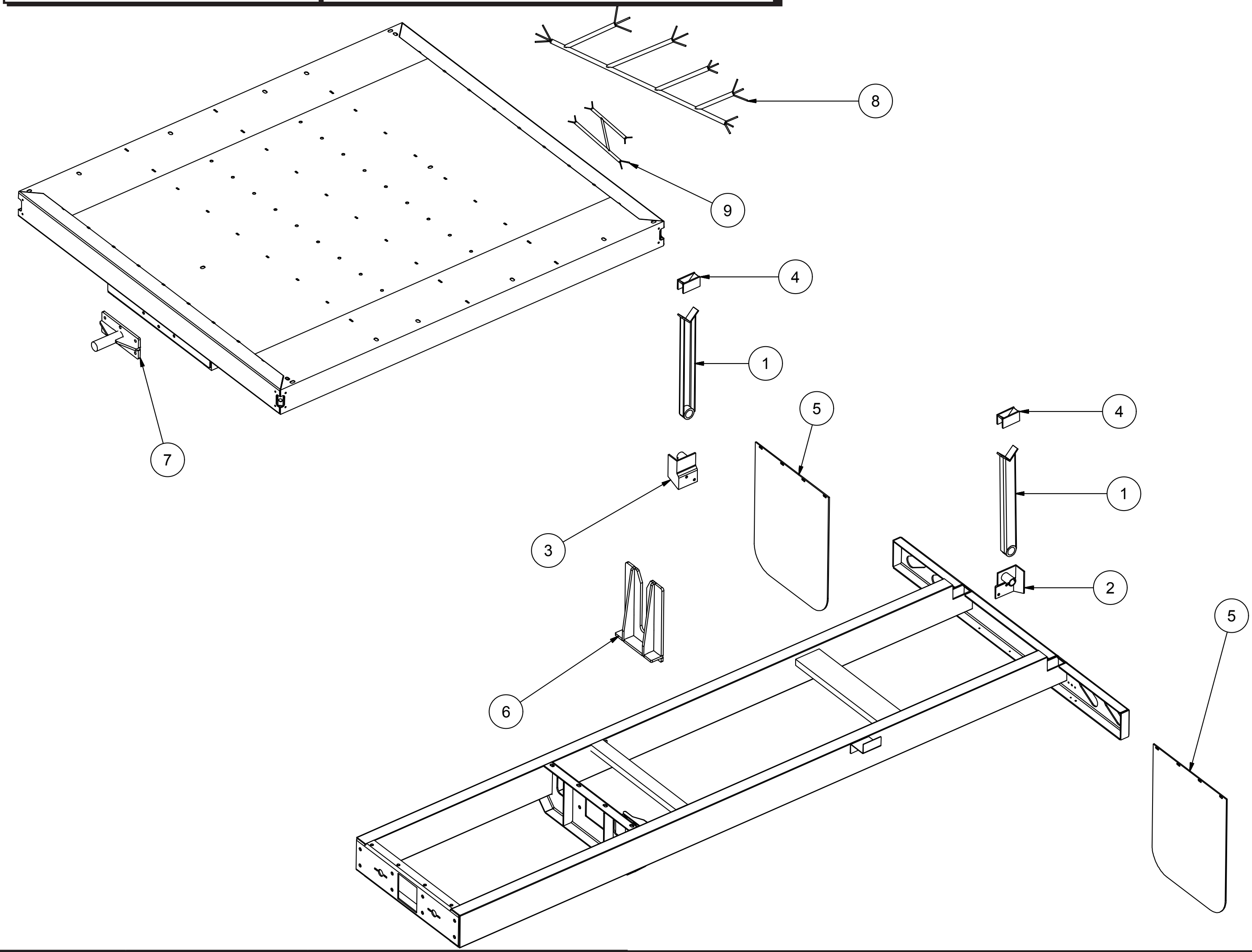
Parts Breakdown Section

9.3 Tongue Group



ITEM #	PART NO.	DESCRIPTION
1	SCL800.622	Tongue, 12 foot
2	SCL800.623	Pintle Eye Assembly
3	SCL800.623P	Clevis Pins
4	SCL800.827	Tongue Hose Clamp Asy
4a	... SCL800.827B	... Clamp
5	SCL800.624	Parking Jack Assembly
6	... SCL800.624	... Jack
7	... SCL800.624.2	...Handle Bracket
8	... SCL.B2.53	... Revolving Handle
9	800.3002	Hydr. Parking Jack Asy (Optional)
10	... 800.3005	... Hydr. Cylinder
11	... 800.3006	... Cylinder Pin, top
12	... 800.3006	... Cylinder Pin, bottom
13	... 800.3010	... Upper Frame
14	... 800.3011	... Lower Frame
15	... 800.3008	... Cap Weldment
16	... 800.3009	... Bottom Pin Kepper
17	SCL822.626	Trailer Power Cord
18	800.2502B	Chassis Wiring Harness
19	SCL800.625	Safety Chain
20	200009.1	Safety Hook

9.4 Chassis Group

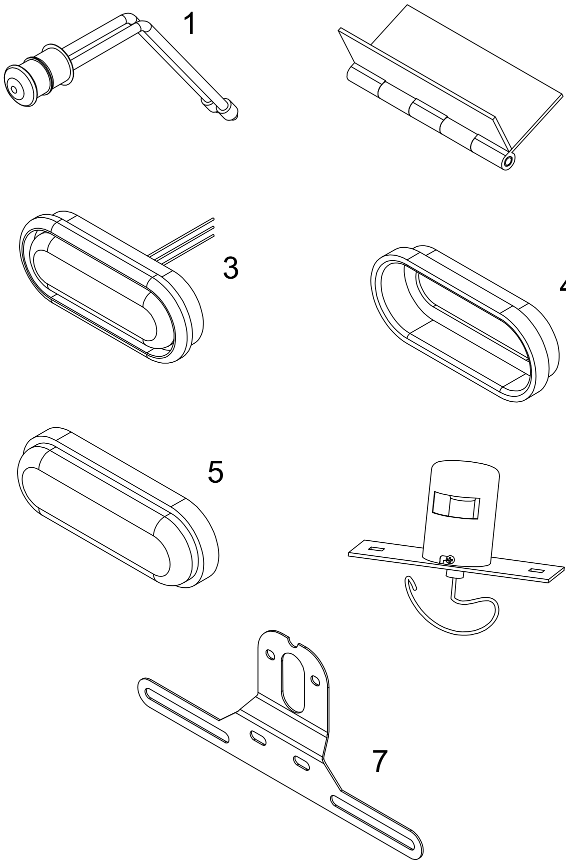


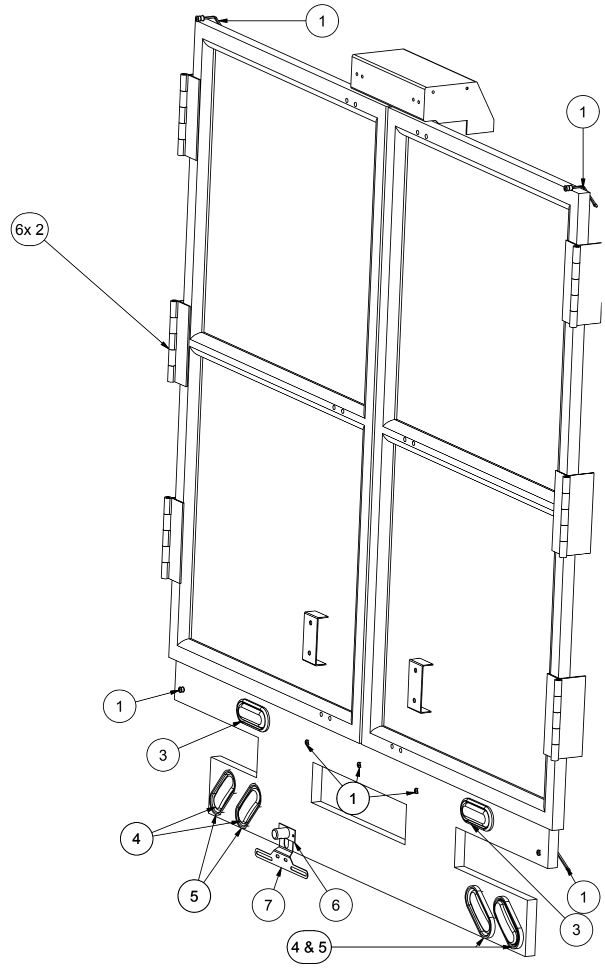
ITEM #	PART NO.	DESCRIPTION
1	SCL800.015	Body Prop
2	SCL800.015B	Body Prop Receiver, Drivers Side
3	SCL800.015C	Body Prop Receiver. Passengers Side (IF Equipped)
4	SCL800.015A	Body Prop Bracket (Welded on Bed)
5	SCL800.811	Mud Flap
6	800.3309	Dump Body Alignment Receiver
7	800.3308	Dump Body Alignment Guide

ITEM #	PART NO.	DESCRIPTION
8	800.2608	Bed Harness
9	800.2501C	Center Marker Light Harness
NS	92907.5 92907.10 2800.103.7 92907.5	Check Valve, Hoist 14CY Check Valve, Hoist, 20CY Check Valve, 25/30CY* Check Valve, 25/30CY**

*Sept 2013-Nov 2013(needs 2); (Champion Hoist)
**thru Sep 2013 and Dec. 2013 and after (needs 2) (Crysteel Hoist)

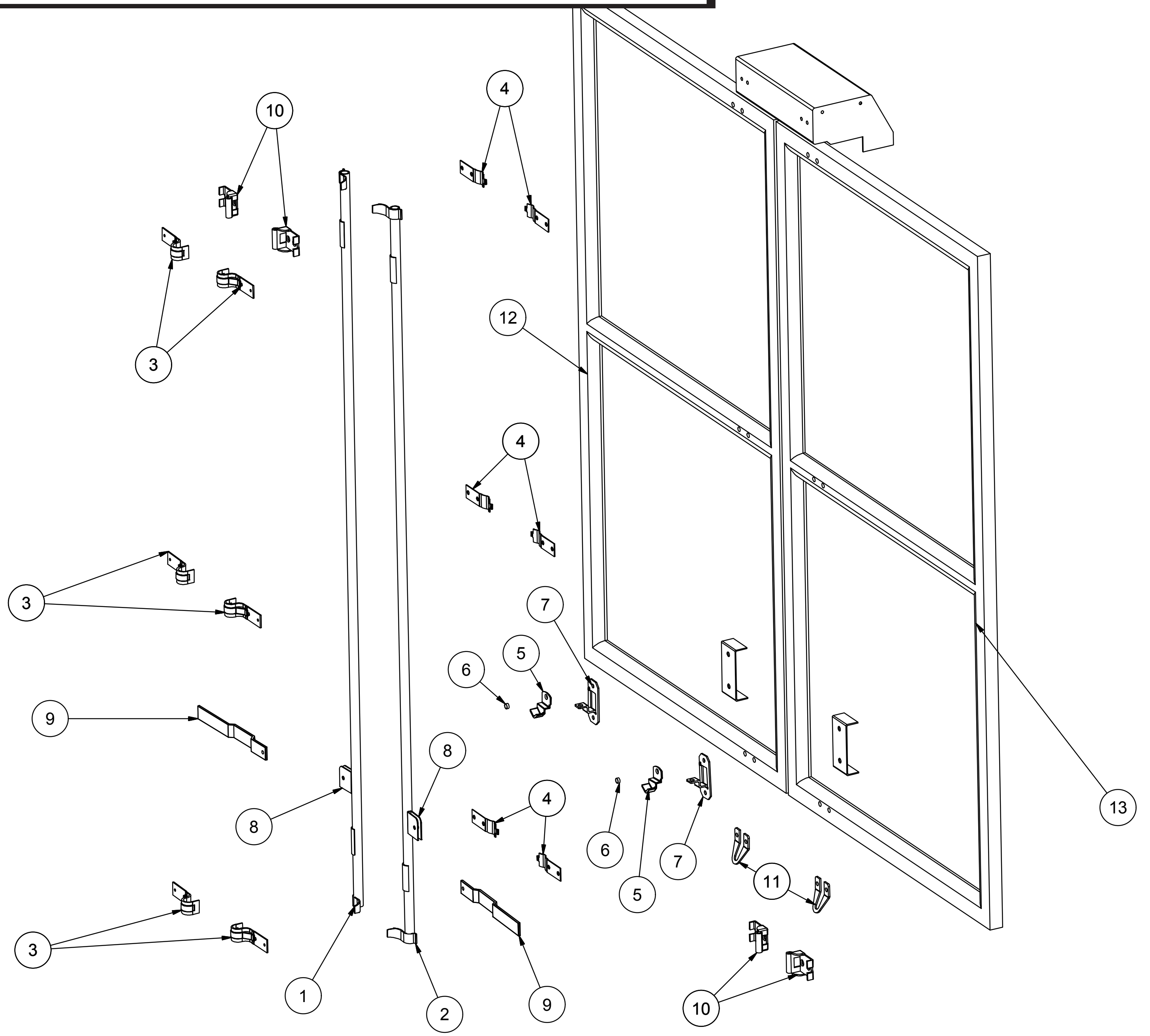
9.5 Light and Reflector Group





ITEM #	PART NUMBER	DESCRIPTION
1	STD.2201 STD.2202	LED Marker Light, Red-- rear of unit LED Marker Light, Yellow-- front of unit
2	SCL800.028	Door Hinge
3	STD.2213.A	LED Strobe Light with Flasher
4	STD.2414	LED Tail Light Assembly (after 01/05)
	94706	Plug Harness (after 01/05)
5	60700	Oval Grommet for tail light
6	LCT60.615B	License Plate Light
7	LCT600.010	License Plate Bracket

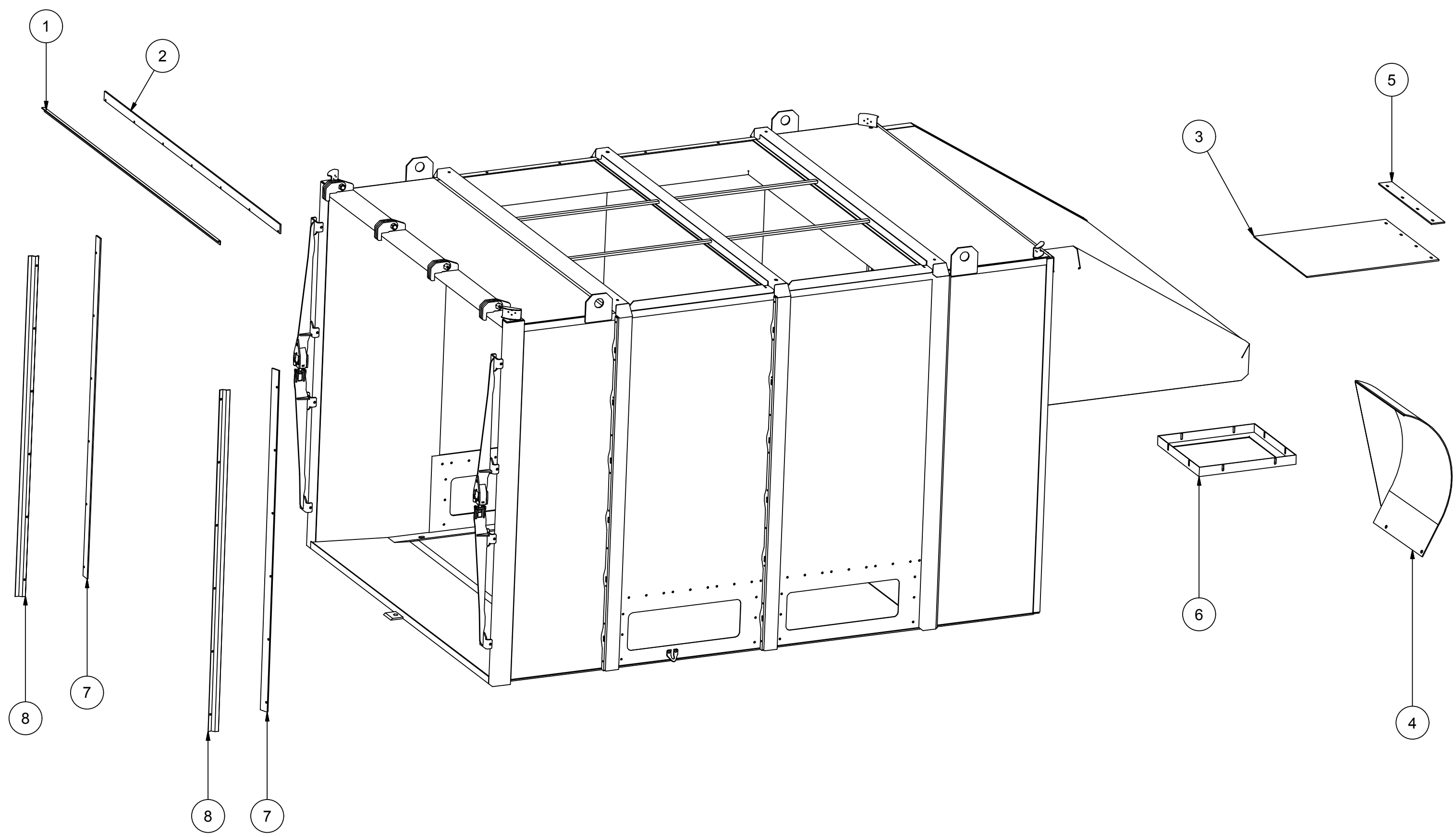
9.6 Rear Door Hardware



ITEM #	PART NO.	DESCRIPTION
1	7502.14A	Door Rod, LH
2	7501.14B	Door Rod, RH
3	7502.2	Rod Bracket
4	7502.3	Rod Bracket Back
5	1969.7X	Seal Pin
6	1969.39	Bushing
7	1969.4X	Seal Plate

ITEM #	PART NO.	DESCRIPTION
8	1969.5	Handle Clip, welded on
9	1969.6X	Handle
10	7502.1	Keeper
11	7502.99	Lock Down Bracket
12	SCL800.027B	Door, driver side
13	SCL800.027A	Door, pass. side
NS	SCL800.028	Hinge for Door

9.7 Box Interior Group



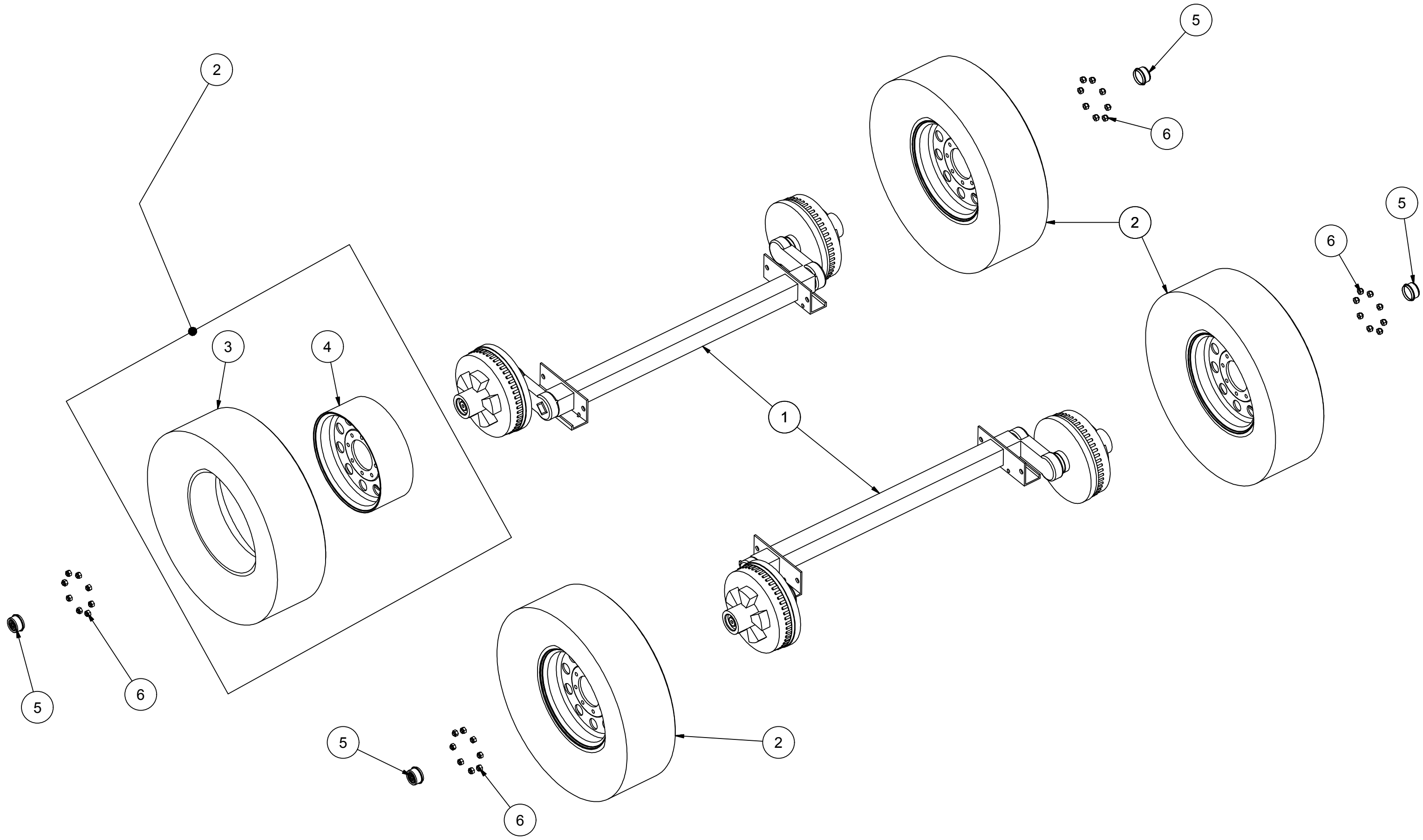
ITEM #	PART NUMBER	DESCRIPTION
1	SCL800.034	Door Seal Bracket, L-shaped; bolts to welded piece on box
2	SCL800.030	Door Seal Rubber
3	SCL800.811	Deflector Rubber
4	SCL800.880.B SCL800.880.D SCL800.880.BBE SCL800.880.DBE	Nose Cone Liner (Belt Drive) Nose Cone Liner (Direct Drive) Nose Cone Liner (Belt Drive w/Bottom Exhaust) Nose Cone Liner (Direct Drive w/Bottom Exhaust)
5	SCL800.881	Deflector Rubber Retainer
6	800.2805	Nose Cone Adjustable Insert - BELT DRIVE UNITS ONLY, used July 2005 and after
7	SCL800.035	Door Seal Bracket - vertical
8	SCL800.030	Door Seal Rubber - vertical, same as #2

10.0 TIRE AND AXLE GROUP

10.0 TIRE AND AXLE GROUP

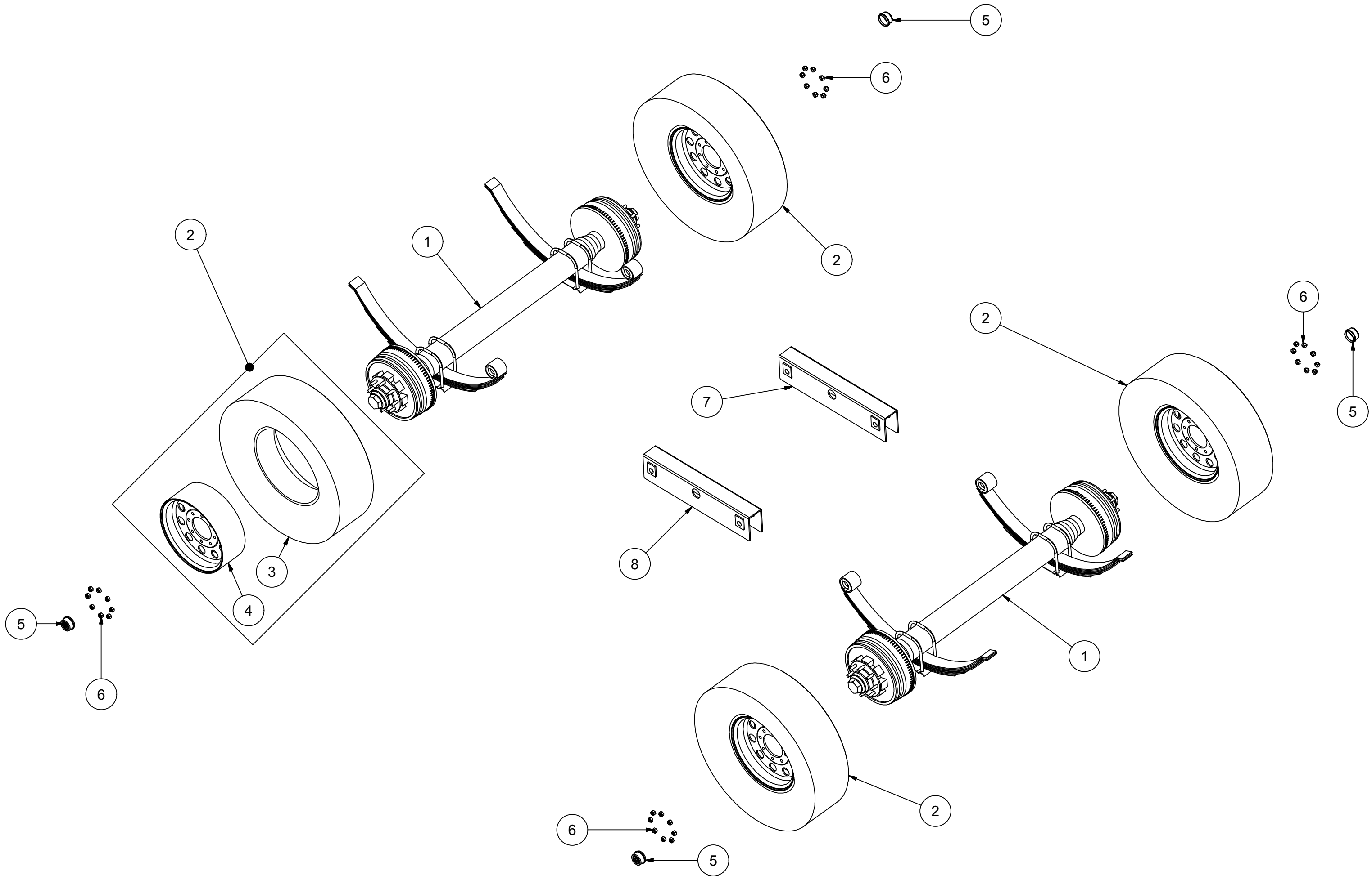
Parts Breakdown Section

10.1 Axle Group - 14CY



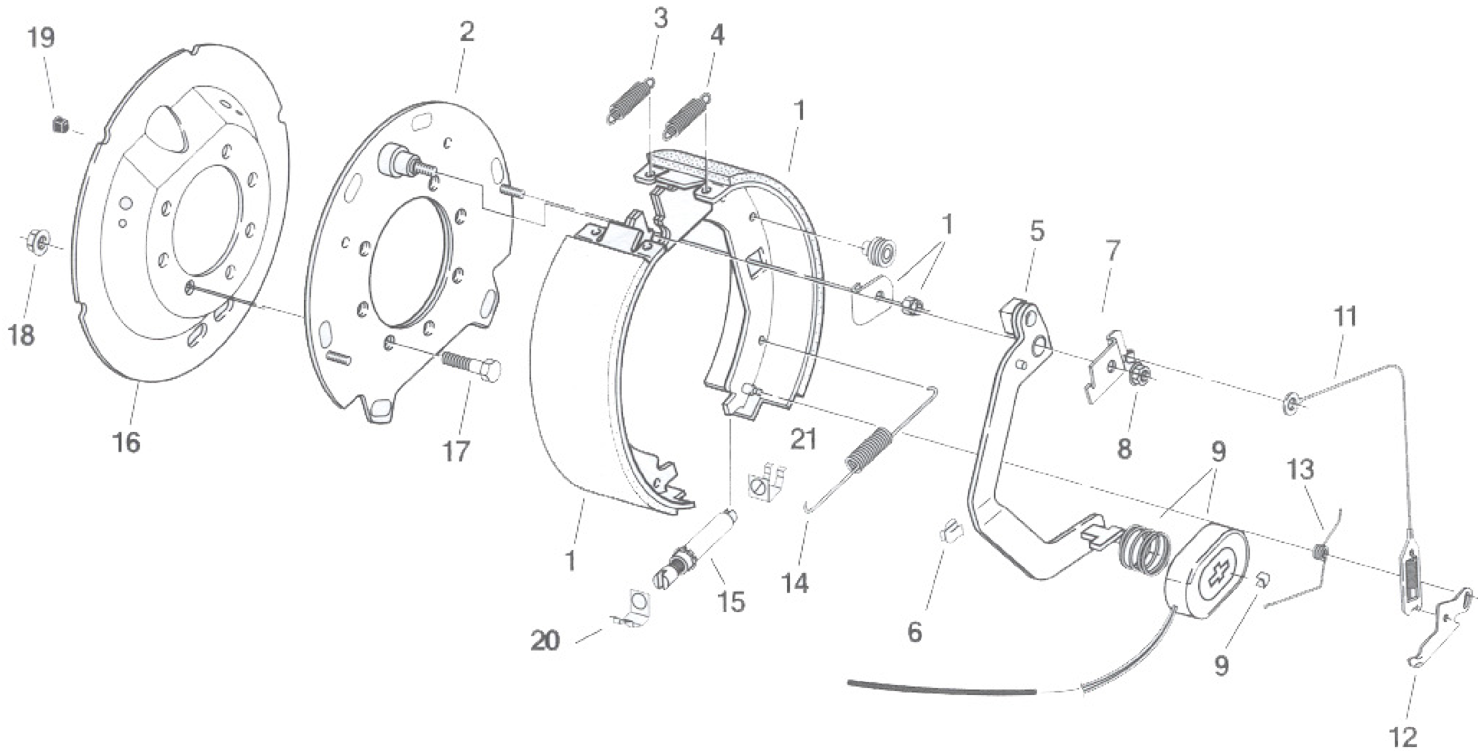
ITEM #	PART NUMBER	DESCRIPTION
1	SCL822.614.14	Axle Assembly, 8K
2	SCL822.619A	Time and Rim Assembly
3	...SCL822.619.T2	...Tire only ST235/85 R16
4	...SCL822.619.R	...Rim only
5	SCL810.820A	Oil Cap, O-ring assembly
6	006.053.00	Lug Nuts, 1/2" - 20

10.2 Axle Group-20,25,30 CY



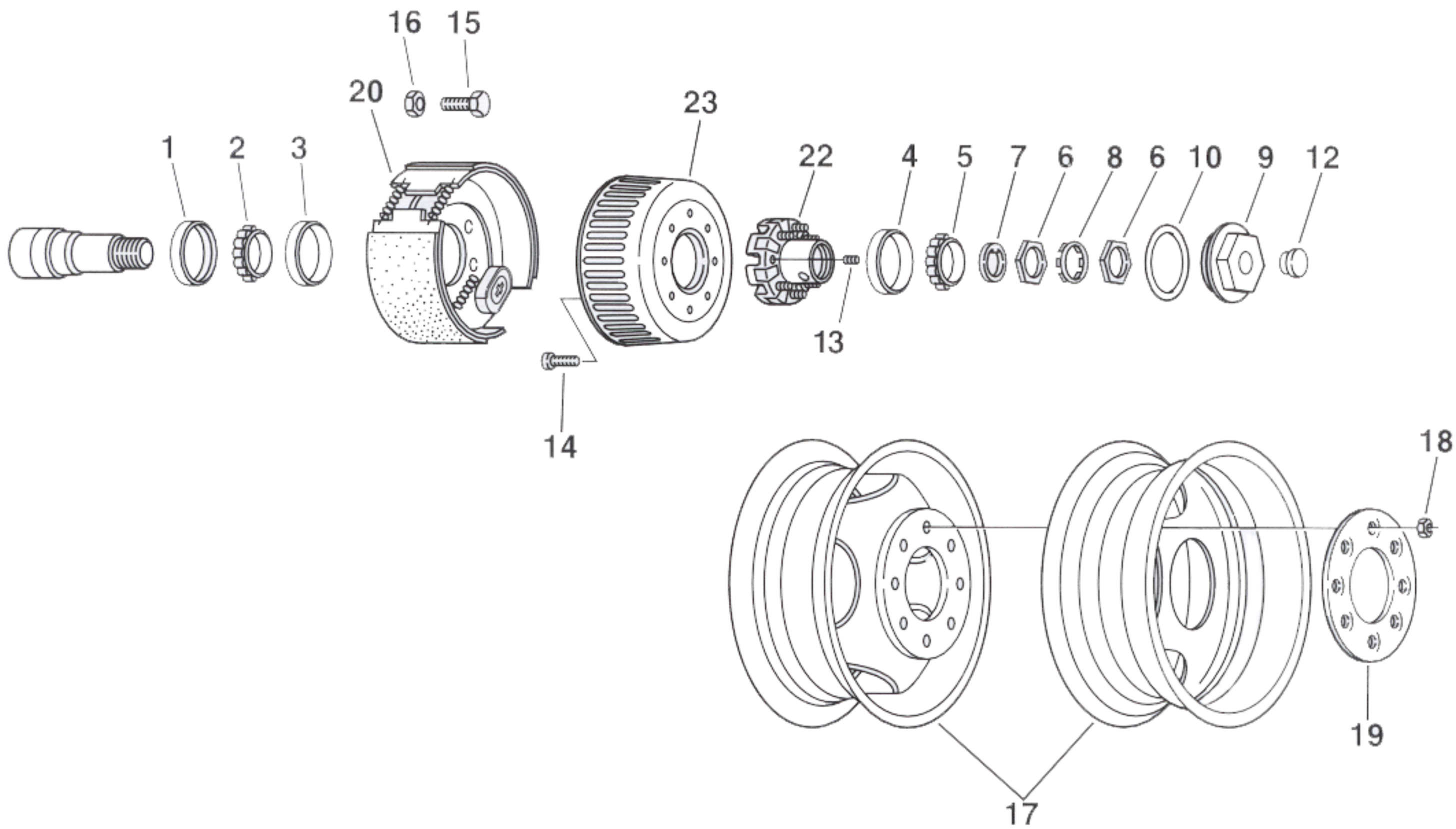
	10K (20CY)	12K (25/30 CY)	
ITEM #	PART NO.	PART NO	DESCRIPTION
1	10000K	29194	Axle Assembly
2	SCL822.620DWR	SCL822.620DWR	Tire and Rim Assembly, 16" Rim
3	...SCL822.619.T2	...SCL822.619.T2	...Tire only, ST235/80 R16
4	...Call	...Call	...Rim only,16"
5	SCL810.820B	SCL810.820B	Oil Cap, O-ring Asy
6	006.109.00	006.109.00	Lug Nuts, 5/8-18
7	013.084.01	013.109.03	Equalizer, LH
8	013.085.01	013.109.04	Equalizer, RH

10.3 Brake Assembly Group



ITEM NO.	DESCRIPTION	PART NUMBERS 6K Axle	8K Axle	9K Axle	10K Axle	12K Axle
*	Brake Kit,LH (includes everyhing on page)	023.105.00	023.097.00	023.450.00	023.450.00	023.442.00
*	Brake Kit,RH (includes everyhing on page)	023.106.00	023.098.00	023.451.00	023.451.00	023.443.00
1.	LH Shoe & Lining Kit	K71.048.00	K71.049.00	K71.049.00	K71.051.00	K71.053.00
	RH Shoe & Lining Kit	K71.048.00	K71.050.00	K71.050.00	K71.052.00	K71.054.00
2.	Backing Plate Assembly	036.089.05	036.050.03	036.072.05	036.072.05	036.072.06
3.	Shoe Return Spring, (Rear-Black)	046.009.00	046.071.00	046.071.00	046.071.00	046.071.00
4.	Shoe Return Spring, (Front-Green)		046.083.00	046.083.00	046.083.00	046.083.00
5.	LH Actuator Arm Assembly	047.107.00	047.123.38	047.123.38	047.123.06	047.123.04
	RH Actuator Arm Assembly	047.108.00	047.123.38	047.123.37	047.123.05	047.123.03
6.	Wire Clip	027.005.00	027.039.00	027.039.00	027.039.00	027.039.00
7.	LH Arm/Shoe Retainer		071.455.01	071.455.01	071.455.01	071.455.01
	RH Arm/Shoe Retainer		071.455.02	071.455.02	071.455.02	071.455.02
8.	Flange Nut		006.062.00	006.062.00	006.062.00	006.062.00
9.	Magnet Kit	K71.105.00	K71.375.00	K71.376	K71.376	K71.377.00
	Magnet Retainer Clip	027.009.00	027.050.00	027.050.00	027.050.00	027.050.00
	Magnet Assembly	042.009.00	042.127.00	042.129.00	042.129.00	042.130.00
	Magnet Mfg. Spring	046.080.00	046.117.00	046.117.00	046.117.00	046.117.00
11.	Adjuster Cable		071.020.00	071.020.00	071.020.00	071.020.00
12.	LH Adjuster Lever		071.019.01	071.019.01	071.019.01	071.019.01
	RH Adjuster Lever		071.019.02	071.019.02	071.019.02	071.019.02
13.	LH Adjuster Lever Spring	046.018.00	046.073.00	046.073.00	046.073.00	046.073.00
	RH Adjuster Lever Spring	046.018.00	046.074.00	046.074.00	046.074.00	046.074.00
14.	Adjuster Spring		046.072.00	046.072.00	046.072.00	046.072.00
15.	LH Adjuster Assembly	043.004.00	048.009.00	048.009.00	048.009.00	048.009.00
	RH Adjuster Assembly	043.004.00	048.010.00	048.010.00	048.010.00	048.010.00
16.	Dust Shield Kit		036.115.20	036.115.21	036.115.22	036.115.23
17.	Brake Mounting Screw		007.097.00	007.116.00	007.116.00	007.116.00
18.	Brake Mounting Nut		006.046.00	006.092.00	006.092.00	006.092.00
19.	Sleeve			027.014.00	027.014.00	027.014.00
20.	Adjuster Clip (thread end)			046.132.00	046.132.00	046.132.00
21.	Adjuster Clip (Barrel end)			046.133.00	046.133.00	046.133.00

10.4 Axle Hub Assembly



ITEM NO.	DESCRIPTION	PART NUMBERS 6K Axle	8K Axle	9K Axle	10K Axle	12K Axle
1.	Oil Seal	021.042.00	010.063.00	010.051.00	010.056.00	010.056.00
2.	Inner Bearing Cone	031.030.02	031.030.02	031.019.02	031.022.02	031.020.02
3.	Innner Bearing Cup	031.030.01	031.030.01	031.019.01	031.022.01	031.020.01
4.	Outer Bearing Cup	031.017.01	031.028.01	031.030.01	031.019.02	031.021.02
5.	Outer Bearing Cone	031.029.02	031.028.02	031.030.02	031.019.01	031.021.01
6.	Spindle Nut	006.176.00	006.001.00	006.096.00	006.084.00	006.084.00
7.	Spindle Washer	005.057.00	005.057.00	005.070.00	005.060.00	005.060.00
8.	Tang Washer	N/A	005.101.00	005.071.00	005.059.00	005.059.00
	Oil Cap Kit contains (#9,10,12)	SCL810.820B	SCL810.820A	SCL810.820	SCL810.820	SCL810.820
9.	Oil Cap	021.001.00	021.035.00	021.036.00	021.036.00	021.036.00
10.	'O' Ring	N/A	010.045.00	010.050.00	010.050.00	010.050.00
12.	Oil Cap Plug	N/A	046.032.00	046.032.00	046.032.00	046.032.00
13.	Wheel Stud		007.132.00	007.115.00	007.115.00	007.115.00
14.	Drum Mounting Screw			007.245.00	007.103.00	007.103.00
15.	Brake Mounting Bolt		007.097.00	007.116.00		
16.	Brake Mounting Nut		006.046.00	006.092.01		
17.	Rim	see axle pages	see axle pages	see axle pages	see axle pages	see axle pages
	Tire and Rim Assembly	see axle pages	see axle pages	see axle pages	see axle pages	see axle pages
18.	Lug Nut	006.080.00	006.053.00	EX30300E[1]	006.109.00	006.109.00
19.	Wheel Clamp Ring	N/A	N/A	N/A	N/A	N/A
20A	LH Brake Assembly	023.105.00	023.097.00	023.450.00	023.450.00	023.442.00
20B	RH Brake Assembly	023.106.00	023.098.00	023.451.00	023.451.00	023.443.00
22.	Hubs w/cups and studs		8.287.92	8.288.3	8.214.5	8.214.08
23.	Brake Drum		8.285.9[2]	009.044.01	009.027.01	009-028-01

Notes:

1 = 1997 and after; 1997 and before use 006.109.00

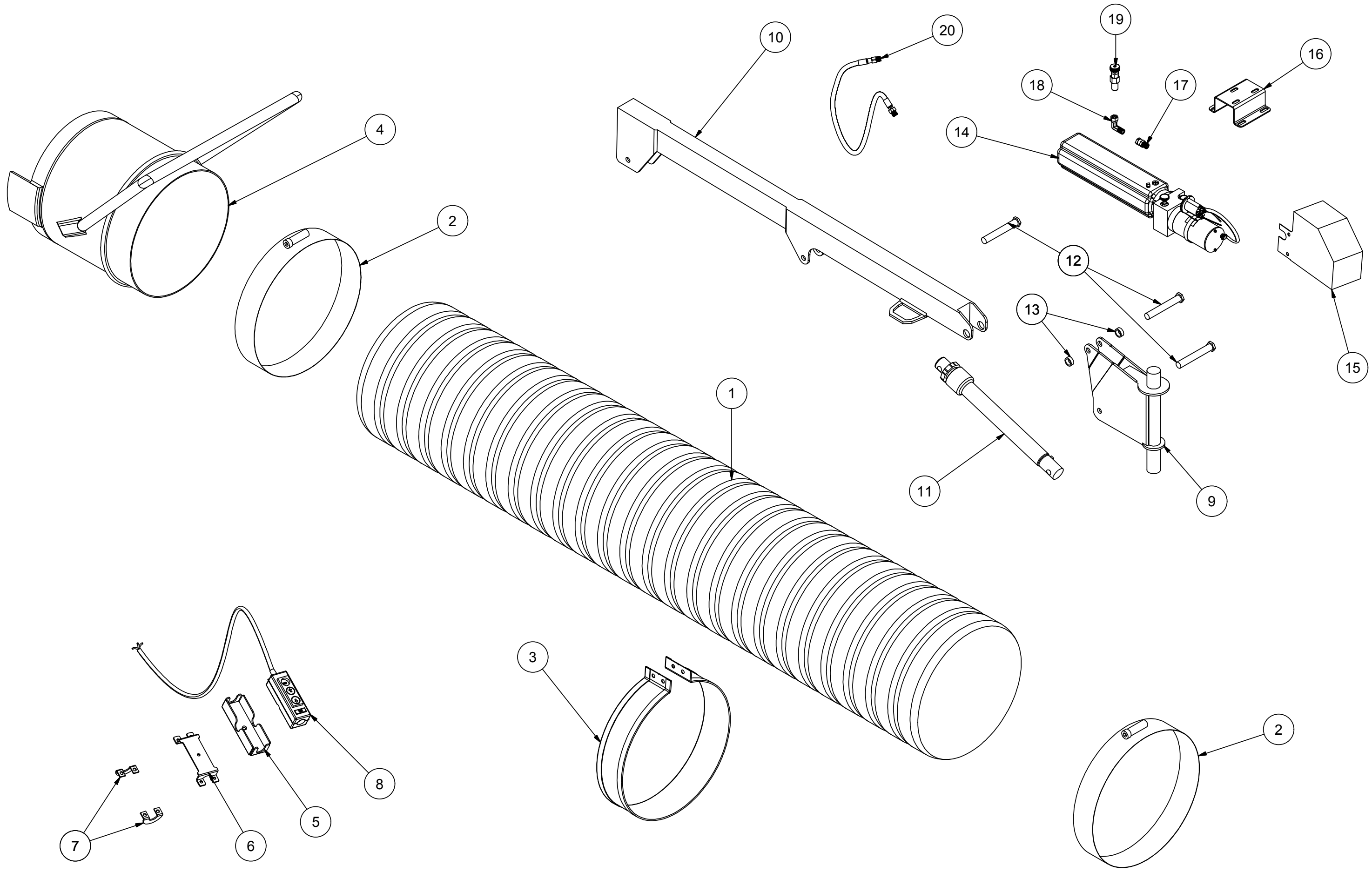
2 = brake drum and studs come together

11.0 HOSE BOOM GROUP

11.0 HOSE BOOM GROUP

Parts Breakdown Section

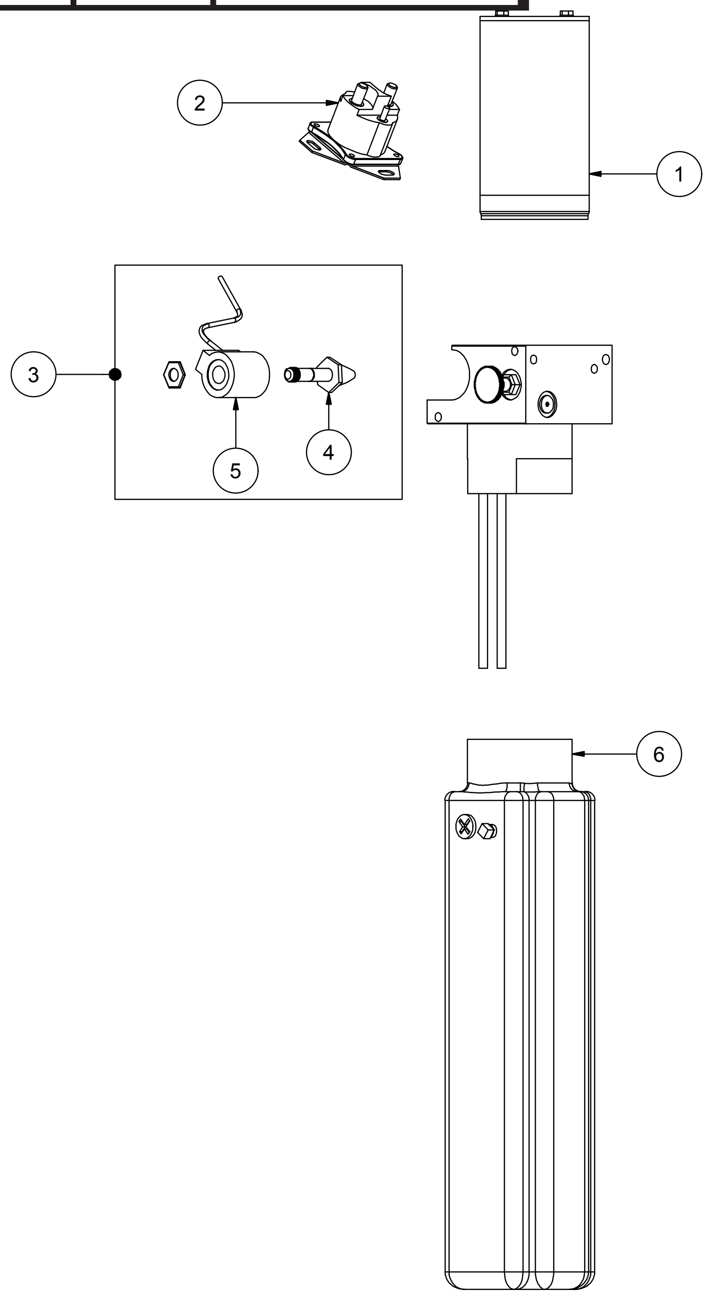
11.1 Intake Hose Boom Group



ITEM #	PART NO.	DESCRIPTION
1	SDH.16.120.UC	Intake Hose
2	SCL816.604	Hose Band
3	LCT616.603U	Support Band
4	LCT616.601	Intake Nozzle
5	STD.2352	Up Down Switch Nozzle
6	STD.2353	Nozzle Switch Bracket
7	LCT616.615D	Hold Down Clamps
8	STD.2350	Up Down Switch
9	550.1608B	Boom Mast
10	LCT616.606A	Boom Arm
11	CS.150.12	Boom Cylinder

ITEM #	PART NO.	DESCRIPTION
12		Bolt
13	RMB531	Brass Bushing
14	M3219.S	Hydralic Pump
15	3219PC	Pump Cover
16	LCT650.104	Pump Bracket
17	9205.4.4	Straight Fitting
18	9405.4.4	90 Degree Fitting
19	LCT617.604	Flow Control Valve
20	LCT617.608	Hydralic Hose

11.2 Hose Boom Pump Group



ITEM #	PART NUMBER	DESCRIPTION
	MP-M3219.S	Complete Pump Assembly (all above)
1	MP-08004	Electric Motor, 12V
2	MP-17744	Solenoid Switch, heavy duty
3	MP-19283D	Coil, Cartridge Assembly
4	MP-07193.D	Cartridge
5	MP-10861.D	Coil, 2 way - 2 position
6	MP-06232	Plastic Reservoir, 3.5" x 15.7"

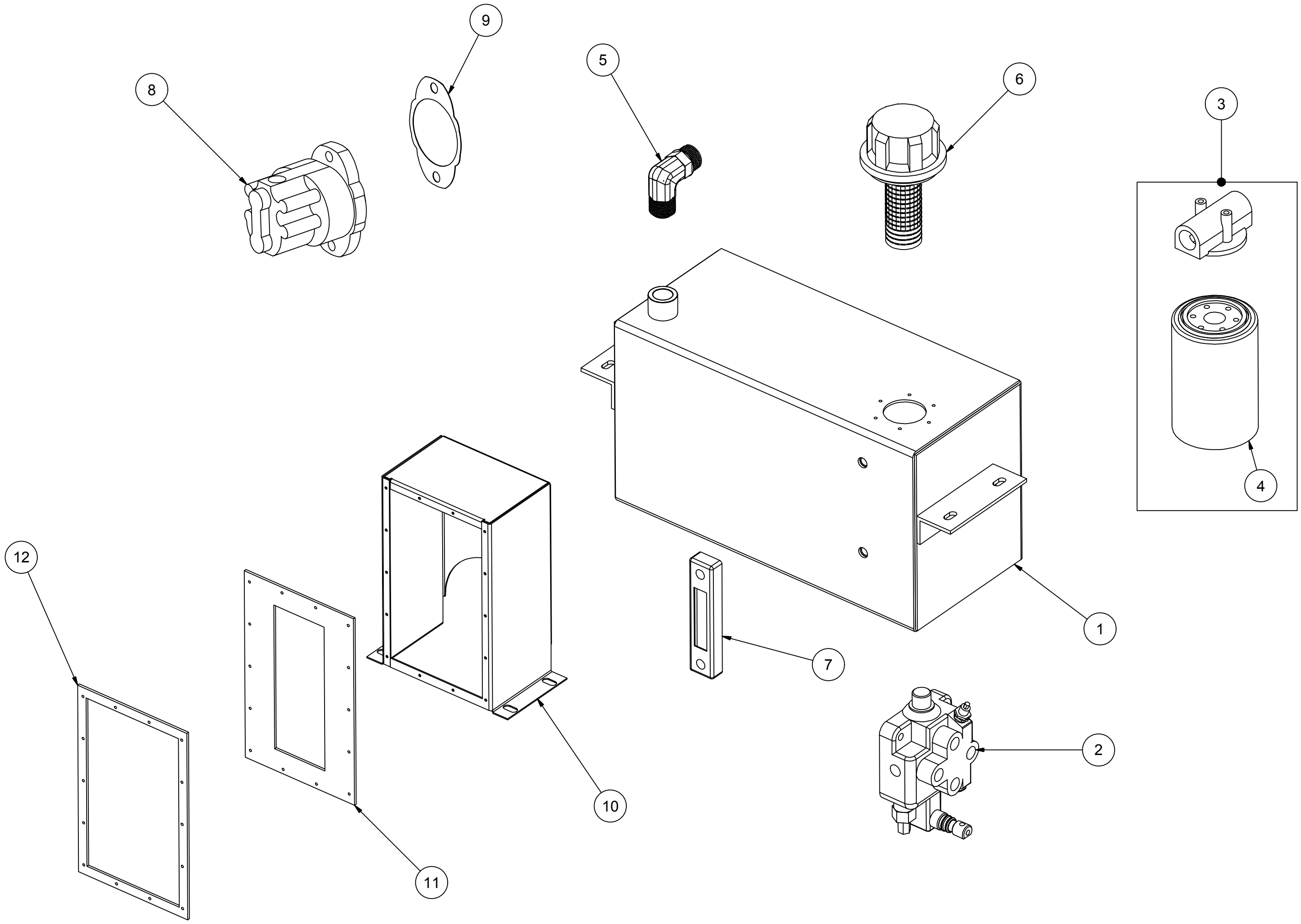
12.0 HOIST HYDRAULIC GROUP

12.0 HOIST HYDRAULIC GROUP

13.0 INDEX

Parts Breakdown Section

12.1 Hydraulic Tank Group



ITEM #	PART NO.	DESCRIPTION
1	550.1010	Hydraulic Tank
2	800.2300 800.2301	Hydraulic Valve Single Spool (No Gear Driven Hyd. Jack) Hydraulic Valve Double Spool (With Gear Driven Hyd. Jack)
3	800.2003	Hydraulic Filter Head
4	800.2004	Hydraulic Filter Only
5		Hydraulic Fitting, 90 Degree
6	800.2005	Filler Cap Assembly
7	SCL.5CT1214	Site guage
8	SCL800.017JD	Hydraulic Pump On Engine
9	JD-R123482	Gasket For Pump
10	550.1011	Hand Valve Cover
11	550.1011C	Cover Gasket
12	550.1011A	Cover Gasket Hold Down

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HOSE BOOM GROUP

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SAFETY PRECAUTIONS

⚠WARNING **Read and understand this entire manual before operating, maintaining or repairing the leaf vacuum.**



⚠ DANGER

DO NOT RIDE, SIT OR STAND ON UNIT.

RIDING ON UNIT COULD RESULT IN BODILY HARM OR FATAL INJURY USE EXTREME CAUTION WHEN UNIT IS IN USE, OR IN MOTION.

If the decal above is missing or damaged call ODB immediately and we will send you a replacement free of charge. Never operate a unit with damaged or missing safety decals.

⚠ DANGER **DO NOT RIDE, SIT OR STAND ON UNIT**

⚠ DANGER **DO NOT MODIFY THE UNIT FOR RIDERS IN ANY WAY. SERIOUS INJURY OR DEATH MAY OCCUR**

ODB's leaf collectors are NEVER to be used to accomodate riders. If your unit has been modified to accomdate riders, remove these modifications immediately as this can result in serious injury or death.

⚠ CAUTION

DO NOT ATTEMPT TO OPERATE OR REPAIR THE LEAF COLLECTOR WITHOUT FIRST READING AND UNDERSTANDING THIS MANUAL

IF YOU HAVE ANY QUESTIONS CONCERNING THE INSTALLATION OR OPERATION OF THIS UNIT, PLEASE CALL ODB FOR ASSISTANCE BEFORE ATTEMPTING TO REPAIR OR OPERATE THE UNIT.

IMPROPER USE OF ANY MACHINE CAN RESULT IN INJURY!

STUDY AND FOLLOW ALL SAFETY PRECAUTIONS BEFORE OPERATING OR REPAIRING UNIT

THIS MANUAL IS AN INTEGRAL PART OF THE LEAF COLLECTOR AND SHOULD BE KEPT WITH THE UNIT WHEN IT IS SOLD.